

# INDEX OF AUTHORS' NAMES.

## ABSTRACTS. 1888.

And also to Transactions, 1888 (marked TRANS.); and to such papers as appeared in Abstract of Proceedings but not in Transactions (marked PROC.).

### A.

- Abbot, H. C. S., and H. Trimble, solid hydrocarbons in plants, 1329.  
 Abel, J. See Ladenburg.  
 Abenius, P. W., aromatic halogen acetamido-compounds and their derivatives, 854.  
 — lactones derived from glycines, 825.  
 Abenius, P. W., and O. Widmann, bromacetoorthotoluide and some of its derivatives, 824.  
 Abt, A. See Nölting.  
 Adam, P., diphenyl-derivatives, 959.  
 Adie, R. H. See Muir.  
 Aducco, urine reaction, 621.  
 Aducco, V., and U. Mosso, physiological action of "saccharin," 310.  
 Ahrens, F., Sandmeyer's reaction: substitution of cyanogen for the amido-group, 266.  
 Ahrens, F. B., sparteïne, 611.  
 Albertoni, formation and change of alcohol and aldehyde in the organism, 973.  
 Albitzky, A., some properties and transformations of dimethylallene, 797.  
 Alexander, H., hydroxylamine platinum bases, 425.  
 Allen, A. H., aluminium in wheat, 631.  
 — determination of sulphur in oils, 627.  
 — precipitation of hop-bitter by lead acetate, 763.  
 — solubility of calcium-compounds, 1030.  
 Allihn, F., filtration apparatus, 526.  
 Alt, K., detection of mercury in urine, 630.  
 Althausse, A. See Bamberger.  
 Altischul, J., orthonitroparahydroxy-quinoline and orthamidoparahydroxy-quinoline, 1108.  
 Altschul, J. See also Schmitt.  
 Amagat, E. H., dilatation and compressibility of liquids, 215.  
 Amat, L., alkaline phosphites, 915.  
 — ammonium phosphites, 107.  
 — pyrophosphorous acid, 914.  
 Amthor, C., cadaveric alkaloid behaving like strychnine, 731.  
 — *Saccharomyces apiculatus*, 1218.  
 — studies on pure yeast, 184.  
 Anderlini, F., compounds of glycogen with sulphuric acid, 934.  
 André, G., action of metallic oxides on solutions of zinc and manganese chlorides, 651.  
 — ammoniacal derivatives of nickel salts, 655.  
 André. See also Berthelot.  
 Andreasch, R., thiohydantoïn, 47.  
 Andreocci, A. See Levy.  
 Ångström, K., alteration in the volume and density of liquids by the absorption of gases, 401.  
 Anschütz, R., action of phosphorus pentachloride on anilic acids, 594.  
 — determination of the molecular weight of dimethyl diacetylracemate by Raoult's method, 1273.  
 — formation of anilic acids from anhydrides of bibasic acids, 277.  
 — isomerism of fumaric and maleic acids, 448.  
 — phenylhydrazide acids from the anhydrides of bibasic acids, 367.  
 — Reissert's pyranilpyroinlactone, pyranilpyroic acid, and anilsuccinic acid, 1092.  
 Anschütz, R., and P. N. Evans, antimony pentachloride, 424.

- Anschütz, R., and C. Gillet, constitution of mesitonic acid, 1272.
- Anschütz, R., and F. Reuter, itaconic acid, 594.
- Arapides, L. See Hantzsch.
- Aristoff, V., and N. Demjanoff, oxidation products of the  $\alpha$ -hydroxy-acids of the fatty series, 251.
- Armitage, J. L., delicate test for morphine, 1137.
- Armstrong, H. E., criteria of plane and axial symmetry, *Proc.*, 93.
- electrolytic conduction: evidence of a change in the constitution of water, *TRANS.*, 125.
- origin of colour and the constitution of colouring matters, *Proc.*, 27.
- valency, 550.
- Armstrong, H. E., and W. O. Wynne, constitution of the dichloronaphthalenes, especially of the  $\alpha$ - $\beta$ -compounds, *Proc.*, 104.
- Arnaud, crystalline arrow poison of the Comalis, extracted from the wood of the Ouabaio, 848.
- strophanthin, 1310.
- Arnold, E., ethylic methyloxalacetate and ethyloxalacetate, 1179.
- Arnold, E. See also Wislicenus.
- Arnold, J. O., Allen's method for the detection of hop-substitutes in beer, 763.
- Arnold, J. O., and H. J. Hardy, determination of chromium in iron or steel in presence of phosphorus, 757.
- estimation of sulphur in steel and in iron for steel making, 1333.
- Arons, E. See Cohn.
- Arrhenius, S., conductivity of illumined air, 544.
- dissociation of substances dissolved in water, 896.
- freezing point of dilute aqueous solutions, 1242.
- influence of neutral salts on the rate of hydrolysis of ethyl acetate, 340.
- theory of isohydric solutions, 1144.
- viscosity of dilute aqueous solutions, 336.
- Arsonval. See d'Arsonval.
- Arth, G., pimelic acid from menthol, 1273.
- Arzruni, A., manganotantalite from the Ural, 234.
- Asboth, A. v., does grain contain sugar? 1220.
- Atterberg, A., testing soil by the growth of oats, 317.
- Atwater, W. O., analyses of American fishes, 308.
- chemistry of fish, 732.
- nitrogen determinations by soda-lime, 990.
- Atwater, W. O., sources of error in determinations of nitrogen by soda-lime, 1334.
- Atwater, W. O., and E. M. Ball, sources of loss in nitrogen determinations, 752.
- Atwater, W. O., and C. D. Woods, soda-lime method for determining nitrogen, 193.
- Aubel, E. v., electrical resistance of bismuth and its alloys, 545.
- Audouynaud, A., rapid fermentation of grape-juice, 989.
- Auger, V., chlorides of bibasic acids, 952.
- Autenrieth, W., mixed acid anhydrides, 250.
- Auwers, K., application of Raoult's method for determining molecular weights, 408.
- Auwers, K., and V. Meyer, investigation of the second Van't Hoff hypothesis, 597.
- Raoult's method for the determination of molecular weights, 646.
- Ayrton, W. E., and J. Perry, alternate current electrolysis, 1006.

## B.

- Bachér, F.,  $\beta$ -picoline, 498.
- Bachmann, E., emodin in *Nephroma lusitanica*, 722.
- Bachmann, I. A., arsenic nitride, 650.
- freezing mixture, 643.
- nickeliferous talc, 661.
- oxidation of solutions of sulphurous anhydride and sulphites, 649.
- Bäckström, H., and G. Paijkull, volume and carbon contents of the gas evolved during the solution of iron in acids, 420.
- Baessler, best time for ploughing in yellow lupines, 191.
- comparative experiments with oats manured with basic slag on moorlands, 189.
- Baeyer, A. v., constitution of benzene, 1069.
- hydrophthalic acids, 1090.
- the reduction products of terephthalic acid, 1069.
- Baginsky, A., bacteria of normal milk fæces, 865.
- Bailey, G. H., absorption-spectra of the rare earths, 1.
- components of rare earths yielding absorption-spectra, 208.
- lead aluminium sulphate, 110.
- Bailey, G. H., and G. J. Fowler, some reactions of the halogen acids, *TRANS.*, 755.

- Bailey, S. C. H., aërolite from Rensselaer Co., New York, 121.
- Baither, O., tetramethyldiamidothio-benzophenone, 289.
- Balbiano, L., basic cupric chromate, 1249.
- Baldi, D., jecorin in the organism, 1313.
- Ball, E. J., alloys of copper and antimony and of copper and tin, *TRANS.*, 167.
- Ball, E. M. See Attwater.
- Bally, O., action of chlorine on pyridine, piperidine, and their derivatives, 964.
- ethyl phloroglucinoltricarboxylate, 955.
- phenylated piperidine and pyridine bases, 65.
- Bamberger, E., camphor bases, 721.
- hydro-derivatives of aromatic bases, 159.
- quinoline, 301.
- Bamberger, E., and A. Althausse,  $\alpha$ -tetrahydronaphthylamine, 959.
- Bamberger, E., and W. Lodter, characteristics of partly hydrogenised aromatic substances, 604.
- — hydrogenation of aromatic hydrocarbons, 292.
- —  $\alpha$ -naphthaldehyde, 375.
- — reduction of the thiamides of aromatic acids, 376.
- Bamberger, E., and R. Müller, phthalimide, 950.
- —  $\beta$ -tetrahydronaphthylamine, 599, 712.
- Bamberger, M. See Weidel.
- Bandrowski, E. v., action of aniline on quinonephenylimide and diphenylparazophenylene, 1081.
- derivatives of paraphenolphenylamine, 943.
- dinitrobenzidine, 286.
- diphenylparazophenylene, 269.
- Bandrowski, F. See Lachowicz.
- Bankiewicz, Z., reduction products of metadinitroacetotoluide, 1184.
- Barbier, O., and L. Vignon, formation of substituted safranines, 54, 141.
- — phenosafranine, 688.
- Bargioni, G., and H. Schiff, anhydrides of cresotic acid, 838.
- Barillot, E. See Chastaing.
- Barlow, J. J., modified Soxhlet's apparatus, 537.
- Barnstein, F., isobutenyltricarboxylic acid and unsymmetrical dimethylsuccinic acid, 135.
- Barr, A., preparation of nitramines from nitrophenols, 822.
- Barrett, W. F., new form of calorimeter, 103.
- Barth, M., ensilage in the open air, 523.
- Barthe, L., methyl benzoylcyanacetate and cyanacetophenone, 951.
- Barthe, L. See also Haller.
- Barus, C., viscosity of gases at high temperatures, 1014.
- Barzloffsky, J., aniline dyes from aromatic diamines, 140.
- Baubigny, H., action of hydrogen sulphide on cobalt salts, 113.
- use of hydrogen sulphide to purify nickel and cobalt, 423.
- Baudoin, G. See Henocque.
- Bauer, A., and K. Hazura, drying oils, 1269.
- Bauer, R. W., galactose from plum gum, 1329.
- saccharin matter in peach gum, 744.
- Baumann, A., azotometric method of soil analysis, 1336.
- estimation of ammonia in soils, 87.
- Baumann, E. See Goldmann, Udránszky.
- Baumert, G., colchicine-like decomposition product, 636.
- constituents of lupine seeds, 1221.
- Baurath, H.,  $\alpha$ -stilbazole ( $\alpha$ -cinnamylpyridine), 65, 608.
- Bayley, T., reaction of iron with nitric oxide, 388.
- separation of zinc from nickel and manganese, and estimation of nickel, 388.
- Bazaroff, A., the atomic weights of the elements, 406.
- Beckenkamp, J., strontianite and celestine from the Kaiserstuhl, 659.
- Beckmann, E., isobenzaldoxime, 55.
- isonitroso-compounds, 43, 55, 409.
- molecular weight of oximes, 646.
- Bedson, P. P., colliery waters, 554.
- Béhal, A., alcoholic nitrate of silver as a reagent for acetylenic hydrocarbons, 930.
- allylene, 663.
- conversion of  $\alpha$ -naphthylidene and caprylidene into isomeric hydrocarbons, 929.
- ethylpropylacetylene, 240.
- hydration of tolane, 959.
- hydrolysis of diallyl, 241.
- preparation of isopropylacetylene from methyl isopropyl ketone, 930.
- Behrend, R., composition of barleys grown in Wurtemberg in 1887, 1331.
- Behrend, R., diazo-derivatives of methyluracil, 809.
- Behrend, R., and O. Roosen, synthetic experiments in the uric acid series, 581.

- Bein, S., indirect determination of fluorine, 527.
- Beketoff, N., energy of compounds and the oxides of sodium and potassium, 1244.
- Bellati, M., and S. Lussana, influence of light on the heat conductivity of selenium, 98.
- Bellati, M., and R. Romanese, transformation of ammonium nitrate, 106.
- Bellone. See De la Bellone.
- Bender, C., salt solutions, 22.
- Bender, G., action of phenylhydrazine on chloracetoacetates, 53.
- action of phenylhydrazine on the alkyl salts of halogen ketonic acids and halogen ketones, 1188.
- Benedikt, R., hydrolysis of fat, 1269.
- Benedikt, R., and M. Cantor, estimation of glycerol, 1345.
- Benedikt, R., and E. Ehrlich, shellac, 846.
- Benedikt, R., and F. Ulzer, shellac, 1308.
- Benedikt, R. See also Ehrlich.
- Benoist, L. See Collin.
- Bente, F., determination of phosphoric acid, 753.
- Berget, A., thermal conductivity of mercury above 100°, 1237.
- Bergreen, H., thiocarbonyl chloride, 444.
- Berlinerblau, M., occurrence of lactic acid in blood and its formation in the organism, 974.
- Berlioz. See Yvon.
- Bernheim, J. See Rousseau.
- Berthsen, A., relations between hydrazides and azo-compounds, 469.
- Berson, G., and A. Destrem, electrolysis of solutions of potassium hydroxide, 1007.
- Berthelot, absorption of nitrogen by soils, 871.
- absorption of nitrogen by vegetable soils, 871.
- absorption of nitrogen by vegetable soils and by plants, 1330.
- ancient process for making gems and glasses phosphorescent, 552.
- conversion of nitrates in soils into nitrogenous organic compounds, 745.
- explosive decomposition of picric acid and other nitro-compounds, 216.
- general conditions favourable to the absorption of free nitrogen by vegetable soils, 624.
- Berthelot and G. André, absorption of salts by plants, 739.
- condition of potassium in soil, plants, and mould, 190.
- Berthelot and G. André, estimation of nitrogen in vegetable soils, 1335.
- phosphorus and phosphoric acid in plants, 743.
- sulphur and phosphorus in plants, soils, and moulds, 384.
- Bertin-Sans, H., spectrum of acid methæmoglobin, 858.
- Bertoni, G. See Pellacani.
- Bettendorf, A., presence of sodium phosphate in glacial phosphoric acid, 321.
- Bettink, W., ophioxilin, 848.
- Bevan, E. J. See Cross.
- Beyer, A., behaviour of the soluble phosphoric acid in superphosphates after keeping in bulk, 223.
- Beyer, C., and L. Claisen, mixed azo-compounds, 827.
- Bichat and Guntz, production of ozone by the electric discharge, 1234.
- Bichat, E. See Blondlot.
- Biel, J., estimation of nicotine in tobacco ash extract, 876.
- Billeter, O. S., and A. Strohl, action of thiocarbonyl chloride on secondary amines, 364.
- Biltz, H., estimating the molecular weight of volatile chlorides, 1241.
- influence of the shape of the bulb in vapour-density determinations, 1240.
- molecular weight of sulphur, 1027.
- Biltz, H., and V. Meyer, stannous chloride, 345.
- Binder, F. See Nölting.
- Binder, O., aspirator with constant flow, 1244.
- detection of nitrates in well waters, 197.
- determination of the amount of soda and lime requisite for purifying water, 758.
- water analysis, 197.
- Birch, B., and H. Spong, secretion of the gall bladder, 307.
- Bischler, A., condensation products from paratoluidine and paranitrobenzaldehyde, 287.
- Bischoff, C. A., azo-dyes from ortho-diamidostilbene, 1094.
- decomposition of anilides at a high temperature, 726.
- ethyl acetylenetetra-carboxylate, 1061.
- isomeric dialkylsuccinic acids, 254.
- orthodinitrostilbene, 1094.
- synthesis of polybasic fatty acids, 1061.
- Bischoff, C. A., and Hjelt, symmetrical diethylsuccinic acids, 1057.
- Bischoff, E., action of nitrous acid on tetramethyldiamidobenzophenone, 1197.

- Bishop, W., action of oils on polarised light, 388.
- Bistrzycki, A., opianic acid, 1209.
- Blake, J. A. See Chittenden.
- Blanc. See Le Blanc.
- Blarez, determination of oxygen dissolved in water, 1344.
- Blau, F., distillation of salts of pyridinecarboxylic acid, 728.
- Blondlot, R., and E. Bichat, determination of the potential differences between mercury and electrolytes, 1005.
- Blount, B., determination of carbon in steel, 530.
- Blümcke, A., determination of the specific weight and vapour-pressure of mixtures of sulphurous and carbonic anhydrides, 775.
- Blum, L., determination of aluminium in presence of iron and phosphoric acid, 324.
- determination of iron in iron ores by the tartaric acid method, 757.
- determination of sulphur in coke, 1333.
- Blythe, G. W., arsenic cyanide, 1047.
- Boas, J., digestion of albumin, 733.
- Bockairy, P., adulteration of butter, 1135.
- Bodländer, G., secretion of perspiration by the skin after taking alcohol, 977.
- Boeck. See also de Boeck.
- Böniger, M., desmotropic derivatives of ethyl succinosuccinate, 954.
- Börnstein, E., detection of Fahlberg's "saccharin" in articles of food, 760.
- Boessneck, P., compounds of acetone with the sulphites of aromatic amines, 942.
- condensation of chloral hydrate with secondary amines, 587.
- Boessneck, P. See also Knöfler.
- Böttinger, C., basic aluminium sulphate, 556.
- compounds of gelatin with tannin, 614.
- gallic acid and tannin, 1090.
- water of crystallisation of pyrotritartrates, 1274.
- Boguski, J. J., attempt to eliminate the change in volume of the vessel in measuring the compressibility of liquids, 1019, 1237.
- rate of the reaction between marble and hydrochloric acid, 900.
- Bohlig, E., testing potassium carbonate, 1224.
- Boisbaubran, L. de, degree of oxidation of chromium and manganese in fluorescent mixtures, 329, 544, 1001, 1229.
- Boisbaudran, L. de, fluorescence of cupriforous calcium oxide, 882.
- fluorescence of ferruginous calcium oxide, 1001.
- fluorescences with well-defined spectra, 97.
- Boissieu. See de Boissieu.
- Bokorny, T., liberation of silver by living cells, 980.
- supposed occurrence of hydrogen peroxide in animal and vegetable juices, 751.
- Bokorny, T. See also Loew.
- Bolton, P. R. See Chittenden.
- Bombelon, E., ergotinine and cornutine, 970.
- Bond, C. J., hæmoglobin crystals in septic diseases, 181.
- Bondonneau and Foret, saccharification in vegetable tissues, 41.
- Bongartz, J., compounds of aldehydes, ketones, and ketonic acids with thioglycollic acid, 478.
- Bonnans, E. See Denigés.
- Booth, H. See Miniati.
- Borchers, W., determination of carbonic acid in mineral waters, 533.
- electrolytic extraction of antimony, 230.
- Borelli, S., benzotribromanilide, 1292.
- Borgmann, E., examination of wine for nitric acid, 753.
- Bornträger, A., determination of tartaric acid in winelees and in tartar, 536.
- Bothamley, C. H., reduction of potassium dichromate with oxalic acid, TRANS., 159.
- Bothamley, C. H., and G. R. Thompson, estimation of chlorates by means of the zinc-copper couple, TRANS., 164.
- Bouchard, C., naphthol as an antiseptic medicine, 183.
- Bouchardat, G., and R. Voiry, terpinol, 719, 961.
- Bouchardat, G. See also Voiry.
- Bouchardat, G., and J. Lafont, action of sulphuric acid on terebenthene, 294.
- Boulzourenno, selenites, 220.
- Bourgeois, L., celestine and anglesite by Senarmont's process, 116.
- Bourgoin and Chastaing, phosphatic mineral water at Viry, 354.
- Bourquelot, E., alcoholic fermentation of galactose, 572.
- Boutlerow, A. See Rizza.
- Bouty, E., electrical conductivity of concentrated nitric acid, 640.
- molecular conductivity of fuming nitric acid, 545.

- Bouty, E., and L. Poincaré, conductivity of fused mixtures of sodium and potassium nitrates, 1231.
- Bowler, T. I., Chinese treatment of cobalt ores, 1253.
- Boyen, E. v., brom Eugenol-derivatives, 680.
- Brackett, R. N., ethereal salts of benzoic sulphinide, 282.
- Brackett, R. N., and C. W. Hayes, preparation of orthosulphobenzoic acid, 279.
- Bradford, J. R., physiological action of ulexine, 1325.
- Brasse, L., estimation of mercury in urine, 196.
- Tanret's reaction for albumin, peptone, and alkaloids in urine, 204.
- Braun, E., sulphuranes, 243.
- Braun, E., and V. Meyer, aldine formation, 1093.
- — aldines, 700.
- — aldines and amidoacetophenone, 366.
- Braun, F., change of volume in gases on mixture, 1015.
- compressibility of rock-salt, 404.
- electric properties of rock-salt, 9.
- relation between the compressibilities of a solution and of its constituent parts, 214.
- Brauner, B., density of cerium sulphate solutions, *TRANS.*, 357.
- Brauner, B., and F. Tomíček, action of hydrogen sulphide on arsenic acid, *TRANS.*, 145.
- Brauns, R., palæopiecitrite of Amelose and the products of its alteration, 34.
- Bréal, E., absorption of nitrogen by leguminosæ, 1330.
- nitrates in soils and waters, 384.
- Bredig, G. See Will.
- Bremer, G. J. W., cause of the change of specific rotatory power under the influence of various solvents, 1141.
- differential tonometer, 402.
- Brenstein, G., action of ether on plant life, 624.
- Brieger, L., tetanine and mytilotoxine, 1317.
- Brignone, different methods of estimating chlorides in urine, 990.
- Brömme, C., action of bromine on the naphthaquinone oximes, 490.
- action of monamines on the naphthaquinoneoximes, 491.
- Brömme, E., and L. Claissen, action of ethyl oxalate on acetophenone, 691.
- Brömme, R., amido-derivatives of metaxylene, 1295.
- Brough, B. H., griqualandite, 236.
- Brown, H. T., and G. H. Morris, molecular weights of the carbohydrates, 610.
- Brücke, E., behaviour of Congo-red with acids and salts, 625.
- behaviour of Congo-red with human urine and with acid salts, 381.
- Brüggemann, R., action of sodium on ethyl butyrate and isobutyrate, 1176.
- Brühl, J. W., terpenes and their derivatives, 377, 494.
- Brüning, G. v., methylhydrazine, 936.
- Brullé, R., adulteration of olive oil, 876.
- Brunlechner, A., minerals from Carinthia, 233.
- Brunn, O., action of iodine on hydrogen arsenide and antimonide, 1224.
- murexoin, 452.
- Brunner, H., and P. Chuit, dichroïns, 363.
- — dichroïns obtained by the action of aqua regia and bromine aqua regia, 1182.
- Brunner, P., and O. N. Witt, naphthaphenazine, 59.
- Bruns, W., and O. v. d. Pfordten, mercurous oxide, 1037.
- Brunton, T. L., and J. T. Cash, action of caffeine and theine on voluntary muscle, 1217.
- Bruylants, J., thiocyanic acid in the animal organism, 1324.
- Buchner, E., action of ethereal salts of diazoacetic acid on ethereal salts of unsaturated acids, 1274.
- Buchner, G., cadmium sulphide: commercial cadmium pigments, 224.
- Budde, V., estimation of grape-sugar in urine by Roberts's method, 198.
- Bühning, L., estimation of fat in fodder, 633.
- Buisine, A., volatile acids of suint, 673.
- Buisine, A., and P. Buisine, malic acid in suint, 976.
- — new source of capric acid, 44.
- Bulitsch, P., action of sulphuric acid on diallyloxalic acid, 450.
- oxidation of diallyloxalic acid, 449.
- Burcker, E., synthesis of toluoylpropionic acid, 951.
- Burfeind, W. H., use of bromine for gold extraction, 1344.
- Burgerstein, A., influence of camphor on the germination of seeds, 742.

- Burkard, E. See Schmitt.  
Burkhard, G., detection and estimation of starch in liquids containing dextrin, 326.  
Burton, W. M. See Morse.  
Busz, J., and A. Kekulé, acetic tri-piperidide, 302.  
Busz, K., titanite, 33.  
Bya, H., estimation of iron with potassium dichromate, 530.

C.

- Cabella, A., derivatives of phenyl paracoumaric acid and methylatropic acid, 694.  
Cahn, A., and Mering, digestion of flesh in normal stomachs, 859.  
Cahn, J., action of chlorates, 978.  
Cailletet, L., air-thermometer, 772.  
Cailletet, L., and E. Colardeau, freezing-mixtures containing solid carbonic anhydride, 1025.  
Cairns, F. I. See Chester.  
Camerer, W., urea and total nitrogen in human urine, 518.  
Campani, G., and S. Grimaldi, vanillin in the seeds of *Lupinus albus*, 983.  
Cantor, M. See Benedikt.  
Cardani, P., and F. Tomasini, specific heat of superfused water, 102.  
Carles, P., plastering of wine, 759.  
Carlier, F. W. See Haycraft.  
Carnegie, D. J., action of finely-divided metals on ferric salts: titration of the latter, *TRANS.*, 468.  
Carnegie, D. J. See also Ruhemann.  
Carnelley, T., and J. Alexander, colour of some carbon compounds, *PROC.*, 64.  
Carnelley, T., and J. Dunn, action of hot copper on the mixed vapours of phenol and carbon bisulphide, 1095, and *PROC.*, 53.  
Carnelley, T., and W. Frew, corrosion of leaden water pipes, 555.  
Carnelley, T., and J. S. Haldane, the air of sewers, 532.  
Carnelley, T., and A. Thomson, solubility of isomeric organic compounds and of mixtures of potassium and sodium nitrates, and the relation of solubility to fusibility, *TRANS.*, 782.  
Carnelley, T., and J. Walker, dehydration of metallic hydroxides by heat, with special reference to the polymerisation of metallic oxides and to the periodic law, *TRANS.*, 5J.  
Carnot, A., estimation of lithium as fluoride, 1342.  
— estimation of lithium in mineral waters, 1342.  
Carson, A. J., and T. H. Norton, uranates, 918.  
Casanova, R. C. See Otto.  
Cash, J. T. See Brunton.  
Cathrein, A., calceostrontianite (emmonite) from Brixlegg, 1258.  
— chloritoid-schist from Grossarl, 568.  
Cavazzi, A., action of carbon bisulphide on metals, 106.  
— action of silicon tetrafluoride on quinine solutions, 968.  
— preparation of hydrogen arsenide, 221.  
Caventou, and C. Girard, action of oxalic acid on cinchonine in presence of sulphuric acid, 507.  
Cazeneuve, P., nitrocamphorates, 963.  
Cazeneuve, P., and L. Hugouenq, apparatus for estimating urea, 328.  
— — — estimation of total nitrogen in organic compounds, 991.  
— — — supposed reaction of phloroglucinol, 994.  
Cervello, V., physiological action of trimethylethoxyammonium and trimethylvinylammonium hydroxides, 309.  
Cesàro, G., diadochite from Visé, 233.  
Chancel, G., and F. Parmentier, estimation of chloroform, 632.  
Chappuis, J., latent heat of vaporisation of volatile substances, 773.  
Chappuis, J. See also Maneuvrier.  
Chastaing, P., and E. Barillot, action of sulphuric acid on morphine and bibasic acids, 165.  
Chastaing. See Bourgoïn.  
Chatelier. See Le Chatelier.  
Chautard, P., cyanaldehyde, 810.  
Chautard, P. See also de Clermont.  
Chester, A. H., alteration-products of rhodonite, 795.  
Chester, A. H., and F. I. Cairns, crocidolite from Cumberland, 118.  
— — — determination of ferrous oxide in insoluble silicates, 196.  
Chevreul, E., atmospheric nitrogen and its relations to vegetation, 979.  
Chibret, antiseptic properties of mercuric cyanide, oxycyanide, and chloride, 1327.  
Chiozza, L., formation of eugenol from coniferin, 941.  
Chittenden, R. H., dehydration of glucose in the stomach and intestines 79.

- Chittenden, R. H., and J. A. Blake, distribution of antimony in the organs and tissues, 81.
- influence of antimonious oxide on metabolism, 80.
- Chittenden, R. H., and P. R. Bolton, egg-albumin and albumoses, 74.
- Chittenden, R. H., and G. W. Cummins, influence of some organic and inorganic substances on gas metabolism, 77.
- Chittenden, R. H., and M. T. Hutchinson, action of uranium salts on digestive ferments, 78.
- Chittenden, R. H., and H. M. Painter, casein and caseoses, 76.
- Chittenden, R. H., and H. H. Whitehouse, metallic compounds of albumin and myosin, 74.
- Chodounska, K., action of zinc-dust on chloral, 669.
- decomposition of quinic acid by dilute hydrochloric acid, 1298.
- Chrapowicz, synthesis of albumin in chlorophyll-containing plants, 868.
- Chree, C., conduction of heat in liquids, 641.
- Chuit, P. See Brunner.
- Ciamician, G., pyrrolylene tetrabromide, 242.
- Ciamician, G., and G. Magnanini, indolecarboxylic acids, 483.
- methylindeolecarboxylic acid, 958.
- pyrrolylene tetrabromides, 799.
- Ciamician, G., and P. Silber, apiole, 606, 847, 1100.
- constitution of some pyrroline derivatives, 61.
- Ciamician, G., and C. Zatti, indolecarboxylic acids, 957.
- Claassen, E., catalpin, 1309.
- Claisen, L., and L. Fischer, benzoylaldehyde, 690.
- Claisen, L., and O. Lowman, benzoylacetone, 692.
- Claisen, L., and N. Stylos, acetoacetaldehyde, 671.
- action of ethyl oxalate on acetone, 676.
- Claisen, L. See also Beyer, Bromme.
- Clark, J., estimation of arsenic in pyrites, 194.
- Clarke, F. W., chemical structure of natural silicates, 659.
- nickel ores from Oregon, 1045.
- studies in the mica-group, 117.
- Clason, P., determination of sulphur, chlorine, bromine, and iodine in organic substances, 320.
- Classen, A., quantitative analysis by electrolysis, 528.
- Classen, A., quantitative separation of titanium from iron, 532.
- titanium trioxide, 424, 789.
- Claudon, E., and E. C. Morin, apparatus for fractional distillation, 646.
- Claus, A., constitution of benzene, 940.
- 2, 5 dibromocymene, 583.
- quinolinesulphonic acid, 728.
- Claus, A., and C. Foecking, methyl duryl ketone, 275.
- Claus, A., and J. Kraus, metacresolsulphonic acids, 280.
- Claus, A., and H. Kurz, chloronitrobenzoic acids, 594.
- Claus, A., and A. Meixner, narceine, 611.
- Claus, A., and T. Steinkauler, dibromosebacic acid and some of its derivatives, 133.
- Claus, A., and A. Stiebel, metanitroquinoline, 295.
- Claus, A., and V. Tornier, brominated quinolines, 163.
- Claus, A., and S. van der Cloet, dichlor- $\alpha$ -naphthaquinonesulphonic acid, 602.
- Clermont, A., formation of peptone, 167.
- Clermont, de. See de Clermont.
- Cleve, P. T., action of chlorine on  $\alpha$ - and  $\beta$ -naphthol, 596.
- sulphimido-compounds, 698.
- Cloet (van der). See Claus.
- Cochenhause, E. v., determination of the hardness of water, 874.
- Cochran, C. B., action of alcohol on butter fat, 634.
- Cohen, E., pleochroism of biotite, 565.
- pseudomorph after marcasite, 563.
- Cohen, J. B. See Miniati.
- Cohn, E., and L. Arons, determination of the specific inductive capacity of conducting liquids, 394, 395.
- Colardeau, E. See Cailletet.
- Colasanti, G., and R. Moscatelli, paralactic acid in the urine of soldiers after a forced march, 1321.
- Collie, N., action of heat on tetramethylphosphonium salts, TRANS., 636.
- new method of preparing mixed tertiary phosphines, TRANS., 714.
- See also Lawson.
- Collin, C., and L. Benoist, estimation of tannin, 1138.
- Collins, W. H., graphite from the Bagontal mountains, Siberia, 428.
- Collmar, C. See Ott.
- Colman, H. G., and W. H. Perkin, jun., synthetical formation of closed



- carbon-chains, Part III (cont.). Derivatives of pentamethylene, *TRANS.*, 185.
- Colson, A., butylenic bases: characteristics of ethylenic diamines, 139.
- secondary diamines containing an ethylene-group, 684.
- Combes, A., derivatives of acetylacetone: synthesis of polyatomic alcohols, 666.
- metallic derivatives of acetylacetone, 128.
- naphthaquinolines, 968.
- syntheses in the quinoline series by means of acetylacetone, 504.
- Comey, A. M., and C. L. Jackson, action of fluoride of silicon on organic bases, 941.
- compound of zinc oxide with sodium hydroxide, 786.
- Comey, A. M., and F. W. Smith, silicofluorides of certain bases, 1283.
- Comstock, W. J., and W. Koenigs, apocinchine, and apochinine, 71.
- Coninck, O. de, fate of pyridine in the organism, 514.
- ptomaines, 730, 1118.
- volatile alkaloids, 328, 539.
- Conrad, M., and W. Epstein, action of ammonia on ethyl acetoacetate and its derivatives, 253.
- Conrad, M., and L. Limpach, condensation of ethyl tetramethylphenylamidocrotonate, 851.
- 4'-hydroxyquinaldine, 1109.
- synthesis of dihydroxyquinaldine-derivatives, 853.
- synthesis of 2' 4' phenylhydroxyquinoline, 505.
- synthesis of the homologues of 4' hydroxyquinaldine, 503.
- Constam, E. J., and H. Goldschmidt, amidoisopropylbenzenes, 681.
- Contamine, determination of hydrogen peroxide, 751.
- Cooke, J. P., and T. W. Richards, relative value of the atomic weights of hydrogen and oxygen, 647, 910.
- Cooke, S., reducing action of hydrogen in presence of platinum, 1245.
- Coppola, F., physiological action of caffeine, 312.
- physiological action of santonin and its derivatives, 310.
- Cornelius, H. See Moscheles.
- Cotton, S., action of chloral hydrate and iodoform on mercuric salts, 670.
- Couldridge, W., interactions of nitrogen chlorophosphide, *TRANS.*, 398.
- Cownley, A. J. See Paul.
- Crafts, air-thermometers, 772.
- Crafts, J. M. See Friedel.
- Craig, G., lecture apparatus for showing combustion of air in coal-gas, 1244.
- Crepieux, P. See Pictet.
- Cripps, R. A., estimation of the alkaloïds of conium, 540.
- Crompton, H., extension of Mendeleëff's theory of solution to the discussion of the electrical conductivity of aqueous solutions, *TRANS.*, 116.
- Cross, C. F., and E. J. Bevan, combustion by means of chromic anhydride, *TRANS.*, 889.
- new compounds of magnesium with the halogens, *Proc.*, 91.
- Cruci, physiological action of alkalis and alkaline earths, 621.
- Crum Brown, A., ferric ferriocyanide as a reagent for detecting traces of reducing gases, 627.
- Cserháti, A., ensilage processes, 522.
- Culmann, J., action of secondary aromatic amines and hydrazines on bromacetophenone, 1287.
- Cummins, G. W. See Chittenden.
- Cundall, J. T. See Shenstone, Thompson.
- Curtius, T., and F. Goebel, ethereal amidoacetates, 576.
- Curtius, T., and F. Henkel, preparation of tetrathionates from Wackendorfer's solution, 552.
- Czapek, F., estimation of uric acid in urine, 1225.

## D.

- Dacomo, G., *Aspidium filix mas*, L., 521.
- Dafert, F. W., Kjeldahl's method of estimating nitrogen, 85.
- Dambergis, A. K., mineral springs of Mentana, 238.
- Damour, A., beryl from Madagascar, 236.
- Damsky, A., sulphocamphylic acid, 293.
- Darapsky, L., zeolites from Chili, 235.
- Dastre, A., influence of bile on the digestion of fats, 618.
- Davidoff, D., methysticin, 1207.
- Davidson, examination of cane-sugar for sulphurous anhydride, 326.
- Davidson, R., estimation of iron in chars, 196.
- Day, T. C., new method of estimating nitrates, either alone or in presence of nitrates or chlorides, *TRANS.*, 422.
- D'Arsonval, A., calorimetry at constant temperatures, 773.
- rapid absorption of carbonic anhydride from expired air, 512.

- De Boeck, G. See Spring.
- De Boisbaudran. See Boisbaudran.
- De Boissieu, P., methyliodoform, 930.  
— new method for the preparation of tetraphenylethylene, 959.
- Debray, H., and A. Joly, ruthenates and per-ruthenates, 920.  
— ruthenium oxides, 426.  
— ruthenium peroxide, 559.
- Debus, H., chemical investigation of Wackenroder's solution, and explanation of the formation of its constituents, *TRANS.*, 278.
- De Clermont, P., and P. Chautard, distillation of citric acid with glycerol, 45.
- De Coninck. See Coninck.
- De Forcrand, bibasic glyceroxides, 642.  
— polybasic glyceroxides, 1264.  
— sodium glycoloxide, 1238.
- De Forcrand and Villard, hydrates of hydrogen sulphide, 644, 897.  
— hydrate of methyl chloride, 897.  
— hydrates of gases, 644.
- Déhérain, P. P., experimental cultivation of sugar-beet in 1887, 383.  
— farmyard manure, 748.
- De Koninck, L. L., determination of carbon in iron, 1341.
- De Koninck, L. L., and A. Leclermier, separation of arsenic, antimony, and tin from gold and platinum, 1344.
- De Koningh, L. See Muter.
- De La Bellone, F., detection of blood stains, 1140.
- De Lacre, M., chloro-derivatives of ethyl acetate, 672.  
— trichloralcohol: action of zinc ethyl on aldehydes, 663.
- De La Harpe, C., and F. Reverdin, nitrosonitroresorcinol, 679.
- Delauney, equivalents of the elements, 902.
- Demarçay, E., spectrum of gold, 765.
- Demjanoff, N. See Aristoff.
- Demuth, R., and V. Meyer, isodibromosuccinic acid, 360.
- Denigès, G., test for uric acid, 1347.
- Denigès, G., and E. Bonnans, rotatory and reducing power of lactose, 933.
- Deninger, A., dicresoldicarboxylic acid, 838.
- Dennstedt, M., and J. Zimmermann, action of methylamine and ethylamine on salicaldehyde, 836.  
— bases formed by the action of hydrochloric acid on pyrrolines, 849.  
— reduction of pyrrolinophthalide, 849.
- De Rey Pailhade, J., organic compound which hydrogenises sulphur, 1101.  
— philothion, 1101.
- De Saint Martin, L., decomposition of chloroform by alcoholic potash, 570.  
— influence of sleep on the activity of respiratory combustion, 305.
- De Schulten, A., action of calcium carbonate on cadmium chloride and bromide, 1036.  
— artificial pyrochroite, 345.  
— silver potassium carbonate, 110.
- Deslandres, H., ultra-violet band-spectrum of carbon compounds, 637.  
— wave-lengths of two red lines in the spectrum of potassium, 637.
- Destrem, A., displacement of copper by zinc, 555.
- Destrem, A. See also Berson.
- De Vries, H., molecular weight of raffinose, 667.  
— osmotic experiments with living membranes, 1153.
- Dewar, J., Weldon-Pechiney process for manufacturing chlorine from magnesium chloride, 411.
- Dewar, J. See also Liveing.
- Dickie, A., water of the Clyde sea area, 569.
- Diesterweg, J. See Nietzki.
- Dietzell, B. C., prevention of the loss of nitrogen in farmyard manure, 873.
- Dircks, V., and F. Werenskiöld, estimation of reduced phosphate, 628.
- Dirte, A., action of carbonic anhydride on aromatic amines, 49.  
— action of vanadic anhydride on alkaline fluorides, 558.  
— action of vanadic anhydride on potassium fluoride, 114.  
— aniline salts, 137.
- Dittmar, W., instability of the double sulphates of the magnesium series, 554.
- Dittmar, W., and J. McArthur, atomic weight of platinum, 425.
- Divers, E., and M. Kawakita, composition of Japanese bird-lime, *TRANS.*, 268.
- Dixon, A. E., action of isothiocyanates on the aldehyde-ammonias, *TRANS.*, 411.  
— benzylidithiourethane, *PROC.*, 34.
- Dobriner, P., boiling points and specific volumes of the normal fatty ethers, 334.  
— specific volumes of normal alcoholic iodides, 334.
- Dobrzycki, L. v., paraisobutylhydroxybenzoic acid, 368.

Döbner, O.,  $\alpha$ -alkylcinchonic acids and  $\alpha$ -alkylquinolines, 299.  
 Döbner, O., and M. Gieseke,  $\alpha$ -phenylcinchonic acid and its homologues, 300.  
 Döbner, O., and G. Petschow, compounds of ketones with dimethylaniline and diethylaniline, 287.  
 Doelter, artificial production of micas and scapolite, 1045.  
 Doelter, C., synthesis of pyrrhotine, 430.  
 Dörken, C., derivatives of diphenylphosphorus chloride and diphenylphosphine, 832.  
 Dollfus, G., and S. Meunier, mineral wax, 115.  
 Donath, E., and F. Müllner, separation of tin oxide from tungstic acid, 531.  
 ——— simple formation of thio-sulphates, 649.  
 Doss, B., felspar and olivine from Syria, 432.  
 Dott, D. B., morphine hydrate, 506.  
 Dott, D. B., and R. Stockman, formula of morphine, 506.  
 Dralle, C. See Schall.  
 Draper, C. N., action of sea water on cast iron, 421.  
 Drasche, E., mineral from Krems, Austria, 233.  
 Drechsel, E., electrolysis of phenol with alternating currents, 1276.  
 ——— electrolysis with alternating currents, 1234.  
 Dreckler, J., expansion, compressibility, and specific heat of solution of the chlorides of potassium and calcium, 1010.  
 Drehschmidt, H., absorption of carbonic oxide by cuprous chloride, 88, 1028.  
 Dressel, O. See Guthzeit.  
 Dreyfus, rate of oxidation of carbon compounds by potassium permanganate, 24.  
 Drouin, R. See Gautier.  
 Drown, T. M., funnel for filtering carbon, 1129.  
 Duboin, A., yttrium compounds, 1249.  
 Dubois, R., and P. Roux, action of ethylene chloride on the cornea, 517.  
 Dürkopff, E., pyridine and piperidine bases formed from acetone, 1313.  
 Dürkopff, E., and M. Schlaugk, constitution of aldehydecollidine, 499.  
 ——— new parvoline, 607.  
 ——— parvoline obtained from propaldehydeammonia and paraldehyde, 1314.  
 Dufet, H., pharmacolite, 794.

Duhem, P., laws of chemical equilibrium, 548, 646.  
 ——— osmotic pressure, 1022.  
 ——— some properties of solutions, 1016.  
 Dunn, J. See Carnelley.  
 Dunstan, W. R., and T. S. Dymond, alleged existence of a second nitroethane, TRANS., 134.  
 ——— preparation of ethyl nitrite, 1048.  
 Duparc, L. See Pictet.  
 Durham, W., solution, 21.  
 Duter, E., electrical conductivity of sulphur, 640.  
 Duvillier, E., action of triethylamine on  $\alpha$ -bromobutyric acid, 249.  
 Dymond, T. S. See Dunstan.

## E.

East, F. J. See Meldola.  
 Ebert, H., application of the method of high interferences to quantitative spectrum analysis, 766.  
 Eckenroth, H., and J. Rückel, action of phenylamine and diphenylamine hydrochlorides on some fatty amines, 942.  
 Edeleanu, L., derivatives of phenylmethacrylic acid, TRANS., 558.  
 Edlefsen, behaviour of urine after the ingestion of naphthalene, 1322.  
 Edwards, G. W. See Manning.  
 Eger, E., paranitrometamidobenzene-sulphonic acid, 1301.  
 Ehrenberg, A., formation of nitrogen during putrefaction, 185.  
 Ehrlich, E., resazoin and resorufin, 145.  
 Ehrlich, E., and R. Benedikt, oxidation of  $\beta$ -naphthol to orthocarboxycinnamic acid, 1306.  
 Ehrlich, E. See also Benedikt.  
 Eichelbaum, G.,  $\alpha$ -benzylhomo-orthophthalic acid, 1300.  
 Einhorn, A., cocaine, 381.  
 Einhorn, A., and J. P. Grabfield, paramethoxyphenylacrylic acid, 477.  
 Einhorn, A., and R. Lauch, action of hypochlorous acid on quinoline and its derivatives, 501.  
 Einhorn, A., and P. Lehnkering, a  $\beta$ -lactone of the quinoline series, 1208.  
 Ekstrand, Å. G., and C. J. Johanson, carbohydrates, 246, 439.  
 Ellenberger and V. Hofmeister, proteolytic and other ferments in oats, and their action on the digestive organs, 867.

- Elliott, W. J. See Ruhemann, Stuart.
- Elsworthy, H. S., modification of Traube's capillarimeter, TRANS., 102.
- Emich, F., amides of carbonic acid, 1063.
- Emmerich, O., hydroxybenzylidene-compounds, 50.
- Emmerling, A., basic slag as a manure for oats, 1223.
- Emmert, A., two dihydroxynaphthalenes, 57.
- Engel, action of hydrogen chloride on cupric chloride, 558.
- aspartic acids, 1065.
- formation of amidobutyric acid by the action of ammonia on crotonic acid, 1063.
- hydrochlorides of bismuth and antimony chlorides, 1042.
- hydrochlorides of cupric and cobalt chlorides, 1248.
- influence of hydrochloric acid on the solubility of stannous chloride, 918.
- Engel and Kiener, formation and elimination of a ferruginous pigment in poisoning with toluylenediamine, 81.
- Engels, C. See Messinger.
- Engelmann, F. See Schmitt.
- Engelmann, T. W., colour of leaves in relation to the assimilation of carbon, 381.
- Engländer, P. See Levy.
- Engler, C., formation of petroleum, 928.
- Epstein, W. See Conrad.
- Erdmann, H., conversion of naphthylaminesulphonic acid into dichloronaphthalene, 290.
- ketonaphthol, (aceto- $\alpha$ -naphthol), 488.
- $\beta$ -naphthylamine- $\delta$ -sulphonic acid and  $\beta$ -naphthylaminesulphonic acid F., 491.
- Erlenbach, A. See Fittig.
- Errera, L., accumulation and consumption of glycogen in fungi, 980.
- Étard, A., a decrease in the solubility of sulphates, 548, 645.
- Ettingshausen, A. v., influence of magnetic forces on the nature of the heat conductivity of bismuth, 400.
- Ettingshausen, A. v., and W. Nernst, thermal and electrical behaviour of some bismuth-tin alloys in the magnetic field, 546.
- Evans, P. N. See Anschütz.
- Evers, F., bases from dinaphthylthiocarbamide, 600.
- Exner, F., theory of researches on contact electricity, 208.

## F.

- Faber, H., changes in the composition of milk, 862.
- Fabingi and Farkas, constant battery with a negative electrode of carbon, 1001.
- Fabre, C., specific heat of tellurium, 332.
- Fahlberg, C., and R. List, orthosulphaminecarboxylic acids, 367.
- Fankhauser, J., diastase, 867.
- Farkas. See Fabingi.
- Fasbender, H., ethylene disulphides and ethylene disulphones, 804.
- diethylene tetrasulphide, 805.
- Fauconnier, A., action of ammonia on epichlorhydrin, 1265.
- action of aniline on epichlorhydrin, 586, 1280.
- Fauconnier, A., and J. Sanson, action of hydrogen chloride on glycerol, 244.
- Faulkner, F., and W. Virtue, biological test for malt, 1228.
- Faure, A., preparation of metallic chlorides from oxides, 1250.
- Faurie, G. A., reduction of aluminium oxide, 28.
- Favorsky, A., isomeric change of acetylenic hydrocarbons by heating them with alcoholic potash, 798.
- isomeric change of disubstituted acetylenes and of dimethylallene under the influence of metallic sodium: synthesis of acetylenecarboxylic acid, 1168.
- Fay, I. W., relation between the heats of formation of chlorides and sulphates in aqueous solution, 401.
- Fehrmann, W., auramines, 156.
- Feit, W., tungsten-compounds, 344.
- Feit, W., and K. Kubierschky, thio-derivatives of antimonic acid, 789.
- Fels, T., testing mercury oxide for chlorides, 873.
- Ferko, M. See Willgerodt.
- Filsinger, F., determination of glycerol, 1133.
- Finger, H., benzazimide, 948.
- Fink, I., bromination of allyl alcohol, 244.
- Finkener, points of difference between linseed oil and linseed oil varnish, 327.
- Fischer, E., compounds of phenylhydrazine with sugars, 590, 1267.

- Fischer, E., hydrazones, 590.  
 — methylketole, 283.  
 Fischer, E., and J. Hirschberger, mannose, 934.  
 Fischer, E., and T. Schmidt, 2'-phenylindole, 698.  
 — 3'-phenylindole, 958.  
 Fischer, E., and A. Steche, conversion of indoles into hydroquinolines, 298.  
 Fischer, E., and J. Tafel, isodulcitol, 806, 1049.  
 — — oxidation of glycerol, 1264.  
 — — synthetical experiments in the sugar-group, 39, 358.  
 Fischer, L. See Claisen.  
 Fischer, O., reduction products of benzylidene-compounds, 50.  
 Fischer, O., and A. Fränkel, orthamidotriphenylmethane, 56.  
 Fischer, O., and E. Hepp, azophenine and induline, 1291.  
 — — azophenine and quinonanilide, 472.  
 — — dibromonitrosophenol, 456.  
 — — paranitrosoaniline, 460.  
 Fischer, O., and L. Wacker, action of nitroso-bases on phenylhydrazine, 1286.  
 Fisher, D., meteorite from St. Croix Co., Maine, 352.  
 Fittig, R., oxidation of unsaturated acids, 595.  
 — lactones and lactonic acids, 251.  
 Fittig, R., and A. Erlenbach, action of sodium on ethyl chloracetate, 1052, 1269.  
 Fittig, R., and H. Schloesser, condensation of ethyl benzoylacetate with succinic acid, 1089.  
 Fitzpatrick, T. C., action of the solvent in electrolytic conduction, 101.  
 Fjord, N. J., feeding of calves and pigs, 1319.  
 Fleischer, M., comparison of manure made with straw and with turf litter, 319.  
 — manuring with nitre, 1223.  
 Fleissner, F. See Lippmann.  
 Fletcher, L., cliffonite, a cubic form of graphitic carbon, 30.  
 — meteoric iron from Greenbrier Co., West Virginia, 662.  
 — meteoric iron from Nejed, Central Africa, 662.  
 Fleury, G., action of iodine on iron, 654.  
 Flink, G., mineralogical notes, 232.  
 Flückiger, F. A., test for acetanilide, 761.  
 Foecking, C. See Claus.  
 Foerster, F., tautomerism of thio-carbamides, 944.  
 Foerster, O., apparatus for the extraction of fat in the cold, 760.  
 — estimation of mustard oil in seeds of cruciferae, 1350.  
 Fogh, J., dimethylanilinequinonimide, 592.  
 Forcrand. See De Forcrand.  
 Foret. See Bondonneau.  
 Formánek, J., quantitative separation of chromium and uranium, 531.  
 Foullon, H. v., new discoveries of minerals, 429.  
 Fouqué, F., a crystallised slag, 794.  
 Fowler, G. J. See Bailey.  
 Fox, W., action of petroleum on lead, 1249.  
 Fränkel, A. See Fischer.  
 Franchimont, A. P. N., action of nitric acid on amides and alkylamides, 477.  
 — influence of negative groups on the properties of compounds, 1052.  
 — sulphacetic acid and its derivatives, 1175.  
 — ureides, 1064.  
 Franchimont, A. P. N., and E. A. Klobbie, derivatives of carbamide, 1179.  
 — — methylamides and ethylamides of heptylic acid, 1063.  
 — — methylamides and ethylamides of trichloroacetic and trimethylacetic acids, 1062.  
 Franck, B., origin and fate of nitric acid in plants, 979.  
 Franke, B., fire-damp, 570.  
 — manganese-compounds, 229.  
 Frankland, P. F., action of some specific micro-organisms on nitric acid, TRANS., 373.  
 — gasometric method of determining nitrous acid, TRANS., 364.  
 Fraser, T. R., strophantin, 606.  
 Freer, P. C., and W. H. Perkin, jun., synthetical formation of closed carbon-chains. Part IV. Derivatives of hexamethylene, TRANS., 202.  
 — — synthetical formation of closed carbon-chains. Part V. Experiments on the synthesis of heptamethylene-derivatives, TRANS., 215.  
 Freire, D., alkaloid from *Solanum grandiflora*, 166.  
 Frey, E., and A. Verneuil, artificial rubies, 561.  
 Frenzel, W., polymerisation products of the tolyl cyanates, 454.  
 Frenzel, A., mineralogical notes, 923.  
 — new analysis of hohmannite, 924.

- Fresenius, H., estimation of arsenic in pyrites, 322.
- Fresenius, R., hot springs of Wiesbaden, 928.
- Fresenius, R., and E. Hintz, detection of arsenic in fabrics, paper, &c., 754.
- Fresenius, W., use of asbestos to aid the subsidence of suspended matter, 320.
- Freund, M., ethyl ferrocyanide, 571.
- ethyl platinocyanide, 571.
- Freund, M., and B. B. Goldsmith, action of carbonyl chloride on hydrazides, 686.
- — — derivatives of carbizin and thiocarbizin, 1187.
- — — derivatives of ethylmalonic acid, 675.
- Freund, M., and E. Gudemann, tetramethylene-derivatives, 1271.
- Frew, W. See Carnelley.
- Freydl, J., constitution of quinoline-derivatives, 296.
- Friedel, C., cinchonamine, 165.
- Friedel, C., and J. M. Crafts, vapour-density and molecular weight of aluminium chloride, 1040.
- — — vapour-density of chlorine and of ferric chloride, 1251.
- — — vapour-density of gallium chloride, 1250.
- Friedheim, C., silver suboxide and the action of potassium permanganate on silver, 415.
- Friedreich, A. See Smolka.
- Friedrichs, F., new galvanic battery, 99.
- Friedrichs. See Greiner.
- Fromm, E., disulphones, 357.
- Fromme, C., maximum galvanic polarisation, 390.
- Frowein, P. C. F., dissociation of hydrated salts, 337.
- Fürth, E., preparation of normal valeric acid and dipropylacetic acid from ethyl malonate, 1053.
- G.**
- Gabriel, S., benzylidenephthalide and isobenzalphthalide, 143.
- ethylamine-derivatives, 439.
- vinylamine, 668.
- vinylamine and bromethylamine, 1267.
- Gabriel, S., and H. Hendess, benzyl-derivatives, 144.
- Gabriel, S., and J. Weiner, derivatives of propylamine, 1292.
- Gabriel and B. Weise, orthocyanotoluene, 261.
- Gaglio, G., stability of carbonic oxide and oxalic acid in the animal organism, 619.
- Gallois, N. See Hardy.
- Gans, R., W. E. Stone, and B. Tollens, formation of saccharic acid as an indication of dextrose, and of furfuraldehyde as an indication of arabinose in carbohydrates, 1059.
- Gantter, F., determination of tannin, 540.
- — — determination of tartaric acid, 535.
- — — determination of the dry residue and fat in milk and butter, 537.
- Gartenmeister, R., Liebreich's inactive space, 783.
- Garzino, L., bromodichlorophenol and dibromodichlorobenzene, 585.
- Garzino, L. See also Guareschi.
- Gatellier, E., manuring experiments with various phosphates, 749.
- Gattermann, L., chloroformamide and its use in synthesis, 574.
- — — nitrogen chloride, 412.
- Gattermann, L., and G. Wichmann, two bye-products in the technical preparation of amidoazobenzene, 829.
- Gautier, A., ptomaines and leucomaines, 303.
- Gautier, A., and R. Drouin, absorption of nitrogen by soils and plants, 746, 871, 1127.
- Gautier, A., and L. Morgues, alkaloïds from cod-liver oil, 1315.
- Gawalowski, A., volumetric determination of sulphuric acid, 751.
- Gayon, U., detection and estimation of aldehydes in commercial alcohols, 326.
- Gazzarrini, A., action of sulphur on benzaldehyde, 950.
- Gedult, R., estimation of reducing sugar, 876.
- Gee, W. W. H., and H. Holden, electrolysis, 887.
- Geitel, A. C., action of sulphuric acid on oleic acid and triolein, 578.
- — — Borneo tallow, 447.
- Geller, W. See Lellmann.
- Gelzer, C., derivatives of paramidoisobutylbenzene, 266.
- Genieser, A. See Willgerodt.
- Genth, F. A., lansfordite, a new mineral, 793.
- — — mineralogical notes, 563.
- Genvesse, P., action of chloroacetonitrile on benzene in presence of aluminium chloride, 951.

- Genvresse, P., combination of aluminium chloride with acetonitrile and chloracetonitriles, 932.
- Genzken, U. See Michaelis.
- Georgievic, P., boric acid, 1247.
- Georgievics, G. v., action of sulphuric acid on quinoline, 296, 501.
- Georgievics, G. v. See also Weidel.
- Gerber, A., derivatives of orthotolidine, 484.
- Gerhard, A., so-called soda-granites, 236.
- Gerlach, G. T., specific gravity of aqueous solutions, 894.
- Gerland, C. See Zincke.
- Gernet, A. v. See Oettingen.
- Gernez, D., action of normal alkaline tungstates on the rotatory power of solutions of tartaric acid, 938.
- action of ammonium molybdate on the rotatory power of solutions of tartaric acid, 97.
- Geuther, A., action of ammonia on ethylidene oxyacetate, 814.
- action of iodobenzene on silver nitrate, 821.
- bitter principle of calamus root, 162.
- constitution of acetoacetic, succinosuccinic, and quinonedicarboxylic acids, 579.
- nitrous anhydride and nitrosyl chloride, 785.
- Giacoso and Monari, alkaloids from the bark of *Xanthoxylon senegalense*, 167.
- Gibson, J., laboratory fittings, 26.
- Gieseke, M. See Döbner.
- Gigli, detection of copper in wine, 873.
- Giglioli, phosphorite of Capo di Leuca, 1259.
- Gilbert, J. H. See Lawes.
- Gildmeister, E. See Wallach.
- Gillet, C. See Anschütz.
- Gilson, E., lecithin, 1214.
- Ginsberg, J., apiole, 722, 1206.
- Girard, C. See Caventou.
- Gladstone, J. H., dispersion equivalents, 389.
- Gladstone, J. H., and W. Hibbert, optical and chemical properties of caoutchouc, TRANS., 679.
- Gläser, M., and W. Kalman, analysis of Roncegno water, 796.
- Gläser, M. See also Morawski.
- Gley, E., toxic action of ouabain and strophanthin, 1326.
- Gley, E., and C. Richet, hourly excretion of urea and total nitrogen in urine, 179.
- Gley, E., and P. Rondeau, physiological and therapeutical action of hyoscyne hydrochloride, 182.
- Glock, G., paratolonylimido ethyl ether, 1289.
- phenyleneparadiacetoimido ethyl ether, 1290.
- Gniewosz, S., and A. Walfisz, absorption of gases by petroleum, 342.
- Godefroy, L., detection of impurities in commercial alcohols, 875.
- Goebel, F. See Curtius.
- Goedeckemeyer, C., action of potassium phthalimide on oxyhalogen-compounds, 1294.
- Goercki, C. See Poleck.
- Görz, A., reduction of gold chloride by wood charcoal, 1042.
- Göttig, C., compound of potassium hydroxide with methyl alcohol, 933.
- compounds of sodium hydroxide and methyl alcohol, 437.
- hydrates of lithium hydroxide, 106.
- Götting, G., constitution of nitroethane, 355.
- Goldmann, E., and E. Baumann, cystin in normal urine, 519.
- Goldmann, F., derivatives of anthranol, 714, 1202.
- Goldschmidt, H., and J. Holm, mixed diazo-compounds, 685.
- Goldschmidt, H., and E. Molinari, diazoamido-compounds, 1283.
- Goldschmidt, H. See also Constam.
- Goldschmidt, G., constitution of papaverine, 1118.
- optical rotatory power of papaverine, 611.
- oxidation of products of piperidine, 302.
- papaverine, 1116.
- Goldsmith, B. B. See Freund.
- Golenkin, M., hydrogenation of triphenylmethane, 483.
- Gonnard, F., association of fluorspar with Babel quartz at Ville-vielle, near Pontgibaud, 561.
- genesis of the plumbiferous phosphates and arsenophosphates of Roure and de Rosiers, Pontgibaud, 429.
- piperite of the Puy de la Piquette, 121.
- pseudomorphs in the lead mines of the Puy de Dome, 348.
- Gorboff, A., oxytetric and hydroxytetric acids, 1179.
- Gorboff, A., and A. Kessler, action of iodoform, methylene iodide, and iodine on sodium isobutoxide, 814.
- Gordon, H., formation of isomeric toluenesulphonic acids, PROC., 78.

- Gore, G., voltaic balance, 1230.  
 Gorgeu, A., action of aluminium and kaolin on calcium chloride, 228.  
 — artificial formation of pyrolusite, 792.  
 — effect of roasting on oxides and salts of manganese, 653.  
 Gorodetzky, J., and C. Hell, action of silver on ethyl dibromosuccinate, 937.  
 — — — dianilidosuccinic acid, 951.  
 — — — preparation of dibromosuccinic acid, 820.  
 Gott, B. S., and M. M. P. Muir, bismuth iodide and bismuth fluoride, *TRANS.*, 137.  
 Gottschalk, M., action of nitric acid on pentamethylbenzene, 261.  
 Gouy and H. Rigollet, electrochemical actinometer, 883.  
 Grabfield, J. P. See Einhorn.  
 Graebe, C., auramine, 158.  
 — phenylsalicylic acid: diphenylene-ketone oxide, 477.  
 Graebe, C., and P. Juillard, benzil-orthocarboxylic acid, 1095.  
 — — — diphtalic acid, 154.  
 Graetz, L., internal friction of liquids, 776.  
 Grassi, C., action of phenylhydrazine on santonin, 295.  
 Grawitz, S., dyes from aniline chromates, 54.  
 Gray, T., electrolysis of copper, 545.  
 Green, J. R., action of sodium chloride in dissolving fibrin, 304.  
 — influence of calcium sulphate on the coagulation of the blood, 306.  
 Greenwood, M., digestion in rhizopods, 79.  
 Gréhan, N., physiological action of the products of incomplete combustion of illuminating gas, 517.  
 — poisoning by carbonic oxide, 622.  
 Gréhan and Quinquaud, estimation of glucose by fermentation, 875.  
 — — — respiration of yeast cells at different temperatures, 623.  
 Greiner and Friedrichs, instruments for measuring liquids, 1332.  
 Grete, A., volumetric estimation of phosphoric acid, 1341.  
 Griess, P., detection of organic matter in water, 993.  
 — diazo-compounds, 588, 826.  
 Griess, P., and G. Harrow, action of aromatic diamines on sugars, 267.  
 — — — action of ethyl acetoacetate on hexamethylenetetramine, 1313.  
 — — — hexamethylenetriamine, 1268.  
 Griffiths, A. B., nephridia and liver of *Patella vulgata*, 178.  
 Griffiths, A. B., and Mrs. Griffiths, influence of certain rays of the solar spectrum on root absorption, 623.  
 Grimaldi, G. P., influence of a magnetic field on the thermoelectric properties of bismuth, 102.  
 — theory of liquids, 1143.  
 Grimaldi. See Campani.  
 Grimaux, E., fermentation of glyceraldehyde, 247.  
 Grimberty, L., rotatory dispersion, 329.  
 Grimberty, L. See also Jungfleisch.  
 Grissom, R. G., action of chlorous anhydride on heptylene, 929.  
 Grissom, R. G., and B. Thorp, new halogen compounds of lead, 916.  
 Groddeck, A. v., clay slate and sericite slate, 795.  
 — copper ores containing tourmaline: geological occurrence of boron minerals, 566.  
 — tin-ore deposits of Mount Bischoff, 434.  
 Gröger, M., oxidation of palmitic acid, 250.  
 Grünwald, W., orthothioxen and orthothiophendicarboxylic acid, 48.  
 Grünwald, W., and V. Meyer, vapour-density of ferric chloride at various temperatures, 422.  
 Grünwald, A., mathematical analysis of the spectra of magnesium and carbon, 389, 882.  
 Grüssner, A. See Hazura.  
 Guareschi, A., camphorimide, 496.  
 Guareschi, I., ptomaines, 731.  
 Guareschi, I., and L. Garzino, isobutylene bromide: bromotrimethyl carbinol, 436.  
 Guareschi, I.,  $\alpha$ -bromophthalic acid, 1300.  
 Gubkin, J., electrolytic separation of the metal on the free surface of the solution of its salt, 101.  
 Gucci, P., reaction between metaphenylenediamine and carbon bisulphide, 588.  
 — separation of copper and arsenic, 630.  
 Gudemann, E., anhydro-bases from unsymmetrical metaxylidine, 1282.  
 Gudemann, E. See also Freund.  
 Günther, E., intramolecular change in benzildioximes, 485.  
 Günzburg, A., free hydrochloric acid in the stomach contents, 617.  
 Guitermann, A. L. See Nietzki.



- Gumbel, C. W. v., glauconite, 119.  
 Guntz, heat of formation of zinc ethyl, 15.  
 Guntz. See also Bichat, Haller.  
 Gustavson, G., action of aluminium chloride on acetic chloride, 575.  
 — conversion of trimethylene bromide into propylene bromide, 240.  
 — preparation of trimethylene, 240.  
 Guthzeit, M., and C. Dressel, ethyl dicarboxylglutarate, 1061.

## H.

- Haas, B., estimation of hydrogen potassium tartrate and free tartaric acid in wines, 1347.  
 Haberland, W., and G. Hanekopp, sodium platossammonium sulphite, 790.  
 Haessermann, C., estimation of paratoluidine in orthotoluidine, 203.  
 Hagen, M., trimethyluracil, 582.  
 Hager, H., crystalline silicic acid, 915.  
 Hague, A., deposition of scorodite from arsenical waters in the Yellowstone Park, 122.  
 Haig, A., excretion of uric acid, 1332.  
 Halagian, G. See Spica.  
 Haldane, J. S. See Carnelley.  
 Haller, A., cyanacetates of the benzene series, 823.  
 — cyanacetates of the cinnamyl series, 1298.  
 — homologues of ethyl acetocyanacetate, 818.  
 — influence of negative radicles on the functions of certain groups, 937.  
 Haller, A., and L. Barthe, ethyl cyanosuccinate and ethyl cyanotricarballylate, 937.  
 Haller, A., and A. Guntz, heat of neutralisation of ethyl cyanomalonate, acetoacetate, and benzoylcyanacetate, 894.  
 Haller, A., and A. Held, methyl acetocyanacetate, 579.  
 Hallgarten, F., derivatives of anthranol, 1202.  
 Halliburton, W. D., coagulation of the blood, 974.  
 Hallock, W., new method of forming alloys, 1163.  
 Hambly, F. J. See Thorpe.  
 Hamlet, W. M., fusel oil in beer, 1263.  
 Hammarsten, O., mucin of the submaxillary gland, 167.  
 Hampe, W., electrolytic conductivity of halogen compounds, 211, 887.  
 Hanekopp, G. See Haberland.  
 Hanriot, M., and C. Richet, absorption of carbonic anhydride, and graphic record of the carbonic anhydride expired, 512.  
 — influence of diet on respiratory changes, 615.  
 — influence of diet on the elimination and absorption of carbon, 615.  
 Hansen, A., function of the colouring matter of chlorophyll, 867.  
 Hantke, E., orthoeresolsulphonic acids, 281.  
 Hantzsch, A., conversion of benzene derivatives into fatty compounds, 130.  
 — decomposition products of chloranilic and bromanilic acids, 1190.  
 — synthesis of thiazoles and oxazoles, 574.  
 Hantzsch, A., and L. Arapides, methylthiazole, 573.  
 Hantzsch, A., and F. Hermann, acetoacetic acid and ethyl succinosuccinate, 675.  
 — desmotropy, 954.  
 Hantzsch, A., and G. Popp, thiazole, 1269.  
 Hantzsch, A., and V. Traumann, amidothiazoles from thiocarbamide and halogenated ketones and aldehydes, 573.  
 Hantzsch, A., and J. H. Weber, thiazole compounds, 256.  
 Hantzsch, A., and A. Zeckendorf, derivatives of ethyl quinoneparadicarboxylate, 278.  
 Hardy, E., and N. Gallois, anagyrine, 1317.  
 Hardy, H. J. See Arnold.  
 Harpe. See de la Harpe.  
 Harrington, B. J., Canadian minerals, 431.  
 Harrow, G. See Griess.  
 Hart, P., estimation of the relative amounts of sodium hydroxide and carbonate in soda ash, 89.  
 Hartley, W. N., absorption-spectra of isomeric cresols, dihydroxybenzenes, and hydroxybenzoic acids, TRANS., 641.  
 — black marble of Kilkenny, 119.  
 — definition of the term atomic weight: its reference to the periodic law, PROC., 66.  
 — identity of natural and artificial salicylic acid, TRANS., 664.  
 — lakmoid and litmin, 295.  
 Hartmann, W., specific rotation of dextrocampaforic acid and its salts, 378.

- Hartshorn, G. T., and C. L. Jackson, anilinetrisulphonic acid, 1093.
- Hartwig, K., electrical conductivity of solutions, 399.
- Harz, C. O., effect of nitrogenous manures on tobacco, 990.
- Hasebroek, K., chylous pericardial fluid, 736.
- fate of lecithin in the body, 173.
- Haseloff, E. See Roser.
- Hasselbach, E., hydrodiphthallactonic acid and hydrodiphthallyl, 485.
- Hatle, E., and H. Tauss, mineralogical observations in Styria, 429.
- Hauer, F. v., barytes in the Carpathians, 33.
- Hautefeuille, P., and J. Margottet, ferric and aluminium phosphates, 420.
- Hautefeuille, P., and A. Perrey, mineralising action of alkaline sulphides: formation of cymophane, 562.
- production of phenacite and emerald, 1044.
- Haycraft, J. B., and E. W. Carlier, coagulation of the blood, 1121.
- Hayduck, the hop and its constituents, 187.
- Hayes, C. W. See Brackett, Remsen.
- Haynes, I. S., absorption of ammonia by acid solutions in nitrogen determinations, 752.
- Hazura, K., acids from drying oils, 816.
- oxidation of unsaturated fatty acids with permanganate, 1270.
- Hazura, K., and A. Grüssner, acids from drying oils, 817, 1270.
- Hazura, K. See also Bauer.
- Heckel, E., sodium benzenesulphinate as an antiseptic for wounds, 182.
- Heckel, E., and F. Schlagdenhauffen, vernonin, 964.
- Hedrick, W. A., paramidorthosulphobenzoic acid, 280.
- Heiden, E., experiments with farmyard manure, 872.
- growth of maize and peas in nutritive solutions, 1328.
- Heim, C., use of magnesium in primary batteries, 1002.
- Heim, E., action of ammonium sulphide on some dinitro-compounds, 1096.
- nitro-derivatives of phenol- $\beta$ -naphthylamine, 488.
- Held, A. See Haller.
- Hell, C., brominating organic acids, 814.
- Hell, C. See also Gorodetzky.
- Hellriegel and Willfarth, absorption of nitrogen by plants, 742.
- Helmholtz, H. v., electrolysis of water, 100.
- Hempel, W., absorption of carbonic oxide by cuprous chloride, 556.
- anhydrous magnesium chloride, 554.
- combination of carbon with iron under pressure, 557.
- evaporation of liquids, 546.
- preparation of cakes of ammonium chloride and ammonium carbonate, 553.
- Hendess, H. See Gabriel.
- Henkel, F. See Curtius.
- Henninger and Sanson, formation of a glycol in the alcoholic fermentation of sugar, 571.
- Hénocque, A., activity of reduction of oxyhæmoglobin, 512.
- hæmatoscopic study of blood, 204.
- Hénocque, A., and G. Baudoin, reduction of oxyhæmoglobin in typhoid fever, 865.
- Henrichsen, S., magnetism of organic compounds, 769.
- Henriques, R., splitting of the naphthalene and benzene rings by oxidation, 842.
- Henry, influence of fodder on the production of lean and fat in pigs, 1319.
- Henry, L., volatility of poly-oxygen carbon compounds, 796, 797.
- Henschel, E. See Kühn.
- Henschke, H., constituents of scopolia root, 82.
- Henschke, H. See also Schmidt.
- Heitschel, W., chlorinated methyl formates, 248, 249.
- Raoult's law of freezing, 1143.
- Hepp, E. See Fischer.
- Heraeus, W., reducing and oxidising properties of bacteria, 313.
- Hérard, F., amorphous antimony, 1256.
- Hereth, F. S., volumetric estimation of alkaloids by Mayer's reagent, 203.
- Hermann, A., Haycraft's method of estimating uric acid in urine, 1225.
- Herrmann, F., configuration of the molecule of benzene, 1026.
- Herrmann, F. See also Hantzsch.
- Hersch, C., analyses of zeolites, 924.
- Hertz, H., influence of ultra-violet light on the electric discharge, 13.
- Herzberg, W. See Stohmann.
- Herzfeld, A., levulose, 667.
- products of the action of red mercuric oxide and baryta water on glucoses, 807.

- Herzig, J., action of sulphuric acid on bromo-derivatives of benzene, 1275.  
 — quercetin, 1309.  
 — quercetin-derivatives, 1309.  
 Herzig, J., and S. Zeisel, desmotropy in phenols: bissecondary pentethyl-phloroglucinol, 822.  
 Hesse, O., hydroquinine, 69.  
 — lactucerin, 722.  
 — morphine, 1115.  
 — cinchona alkaloids, 379.  
 Heusler, F. See Wallach.  
 Heyes, J. F., tetravalency of oxygen, 551.  
 Heymann, B., and W. Koenigs, lepidine compounds, 852, 1113.  
 Hibbert, W. See Gladstone.  
 Hilbert, P. See Jaffe.  
 Hilgard, E. W., effect of lime as a soil constituent on the development of plants, 318.  
 Hilgenstock, G., tetrabasic calcium phosphate and the basicity of the silicate in basic slag, 223.  
 Hill, H. B., furfuracrylic acid, 256.  
 Hill, H. B., and A. W. Palmer, mucrohydroxybromic and mucrohydroxychloric acids, 451.  
 Hillebrand, W. F., and H. S. Washington, rare copper minerals from Utah, 1043.  
 Hindorf, R., influence of magnesium and calcium chlorides on germination, 1126.  
 Hinsberg, O., action of glyoxal on aromatic amines, 372.  
 Hintz, E., determination of acetone in wood-spirit, &c., 759.  
 Hintz, E. See also Fresenius.  
 Hinz, E., parabenzoylequinoline and paradiquinoline, 300.  
 Hirn, G. A., property of carbon similar to that of spongy platinum, 1028.  
 Hirsch, L., guanidines and guanidine cyanides, 947.  
 Hirsch, R.,  $\alpha$ -naphthylamine- $\delta$ -mono-sulphonic acid, 1200.  
 Hirschberger, See Fischer.  
 Hjelt, E., symmetrical diethylsuccinic acids, 254.  
 Hjelt, E. See also Bischoff.  
 Hobbs, P. L., derivatives of orthotolidine, 708.  
 Hockauf, J., halotrichite from the Tyrol, 923.  
 Hodgkinson, W. R., and F. K. Lowndes, combustion of oxygen in ammonia and of hydrogen in nitric acid, 1244.  
 — — — lecture apparatus for making sulphuric anhydride, 647.  
 Hölbling, V. See Sobiecky.  
 Hönig, M., and L. Jesser, carbohydrates, 1266.  
 Hönig, M., and S. Schubert, inulin, 246.  
 — — — lichenin, 127.  
 Hoffmann, L., and G. Krüss, gold sulphides, 28.  
 Hofmann, A. W., anhydro-bases of fatty diamines, 1050.  
 Hofmeister, V., nitrogenous constituents of the contents of the intestine which arise from the body, 861.  
 Hofmeister, V. See Ellenberger.  
 Holden, H. See Gee.  
 Holland, P., gold quartz from the Transvaal, 428.  
 — quartz conglomerate from Witwatersrand, Transvaal, 568.  
 Holleman, A. F.,  $\beta$ -nitrocymene, 454.  
 — phenylacetylene and diphenyldiacetylene, 261.  
 — products of the action of nitric acid on acetophenone, 275.  
 — simple procedure for the determination of molecular weights by Raoult's method, 552.  
 Holm, J. See Goldschmidt.  
 Holzmänn, E., thio-derivatives of some secondary and tertiary amines, 1080.  
 Hoogewerff, S., and W. A. van Dorp, action of potassium hypobromite on amides, 1194.  
 Hooker, S. C., purpurogallin, 292.  
 Hoppe-Seyler, G., ethereal hydrogen sulphates in morbid urines, 179.  
 Horbaczewski, J., synthetical researches on, and constitution of uric acid, 256.  
 Horn, F. M., oil from the seeds of *Curcas purgans*, 674.  
 Hornberger, R., spring-sap of the birch and hornbeam, 313.  
 Horstmann, A., physical constants of benzene, 1069.  
 Horton, H. E. L., hexamethylene-amine-derivatives, 1051.  
 Hotter, E., phenaceturic acid and its derivatives, 1298.  
 Houzeau, determination of total nitrogen, 752.  
 Hüfner, G., absorption of gases by grey vulcanised caoutchouc, 783.  
 — tension of oxygen in the blood, and in solutions of oxyhæmoglobin, 1214.  
 Hueppe, decomposition of carbonic anhydride by plants deprived of chlorophyll, 1125.  
 Hüppe, F., plants free from chlorophyll acting like chlorophyll-containing plants, 623.

- Hugounenq, L., and J. Morel, sodium potassium carbonate, 786.  
 Hugounenq. See also Cazeneuve.  
 Hunt, T. S., dissociation of fused metallic sulphides, 1254.  
 Hunter, W., pernicious anæmia, 1324.  
 Huntley, G. N. See Japp.  
 Huppert and H. Záhoř, densimetric estimation of proteids, 1226.  
 Hutchinson, M. T. See Chittenden.

## I.

- Igelström, L. J., jacobsite from Nordmarken, 563.  
 — jacobsite from the Sjö Mine, 562.  
 — manganese-bearing idocrase from Sweden, 235.  
 — pyrrho-arsenite, a new mineral from the Sjö Mine, 565.  
 Ihl, A., testing beet-sugar for purity, 876.  
 Ihmori, T., condensation of water-vapour by solid substances, 24.  
 Ikuta, M., paranitrosodiphenylamine, 467.  
 Iles, M. W., lead slags, 416.  
 Irvine, R., action of bleaching agents on writing ink, 764.  
 Isambert, F., compressibility of an aqueous solution of ethylamine, 216.  
 — compressibility of solutions of gases, 20.  
 Isbert, A., and A. Stutzer, determination of phosphoric acid, 194.  
 Isbert, A., and A. Venator, determination of alkaline hydroxides in presence of carbonates, 1130.  
 Isbert, A. See also Stutzer.  
 Itsrati, C., action of sulphuric acid on chlorobenzenes, 259.  
 — franceins, 591.  
 — nitrochloroethylbenzenes, 260.

## J.

- Jackson, C. L., and G. D. Moore, additive product of tribromodinitrobenzene and tetrabromodinitrobenzene, 821.  
 Jackson, C. L., and W. S. Robinson, action of ethyl sodomalonate on tribromodinitrobenzene, 1091.  
 Jackson, C. L., and J. F. Wing, action of nitric acid on symmetrical trichlorobenzene, 136.  
 — benzenetrisulphonic acid, 152.  
 — tribromotrinitrobenzene, 1276.  
 Jackson, C. L. See also Comey, Palmer, Hartshorn.

- Jacobsen, E., and P. Julius, condensation of cinnamic acid with gallic acid, 56.  
 Jacobsen, O., action of sulphuric acid on bromodurene, 137.  
 Jacobson, P., action of carbon bisulphide on benzeneazo- $\beta$ -naphthol, 487.  
 — orthamidated aromatic mercaptans, 1306.  
 Jacoby, R., action of chlorine on carbonylorthamidophenol, 682.  
 Jacquemin, G., estimation of urethane in urine, 878.  
 — *Saccharomyces ellipsoideus* and its use in the preparation of wine from barley, 738.  
 Jaecle, A., higher homologues of the synthetic pyridines and piperidines, 1103.  
 Jäger, G., comparative properties of the electrical conductivity of salt solutions, 398.  
 — electrical conductivity of solutions of neutral salts, 397.  
 — relative size of molecules calculated from the electric conductivity of salt solutions, 217.  
 Jaenke, H. See Zincke.  
 Jaffe, M., and P. Hilbert, acetanilide and acetotoluide in relation to animal metabolism, 735.  
 Jahn, H., validity of Joule's law for electrolytes, 10.  
 Jahns, E., trigonelline, 166.  
 Jahoda, R., diamidopyrene, 161.  
 — pyrenoline, 164.  
 Jaksch, R. v., ferments in human faeces and in the contents of cysts, 180.  
 Jandous, A., oil of peppermint, 962.  
 Janeček, G., electrolysis of the acids of phosphorus, 914.  
 Jannasch, P., biotite from Christiania, 1260.  
 — spodumene from Brazil, 795.  
 Jannasch, P. See also Klein.  
 Jannettaz, E., chrysocolla from California, 565.  
 Janovsky, J. V., azotoluenesulphonic acid, 370.  
 — toluidinesulphonic acids, 956.  
 Janovsky, J. V., and K. Reimann, substitution products of azoparazotoluene, 686.  
 Janssen, J., spectra of oxygen, 765.  
 Japp, F. R., and G. N. Huntley, action of phenylhydrazine on an unsaturated  $\gamma$ -diketone, TRANS., 184.  
 Japp, F. R., and F. Klingemann, constitution of certain so-called mixed azo-compounds, TRANS., 519.  
 — formation of dihydrazides of  $\alpha$ -diketones, PROC., 11.

- Japp, F. R., and F. Klingemann, new method of obtaining monohydrazides of  $\alpha$ -diketones, *Proc.*, 11.
- Jaquet, A., hæmoglobin of dog's blood, 731.
- Jaworski, W., action of acids on the functional activity of the human stomach, 616.
- Jean, F., detection of cotton-seed oil in olive oil, 1136.
- Jeaurenaud, A., condensation of phenylacetaldehyde with ammonia and ethyl acetoacetate, 965.
- Jedlička, K. See Levy.
- Jehn, C., action of polyatomic alcohols on solutions of boric acid, and sodium hydrogen carbonate, 1172.
- Jellinek, G., purification of flavopurpurin, 1204.
- Jellinek, G. See also Liebermann.
- Jensch, E., manurial action of the free lime in basic slag, 525.
- Jentys, S., influence of compressed oxygen on the growth of plants, 1125.
- Jesser, I. See Hönig.
- Joannis, A., alloys of sodium and potassium, 1238.
- Jodin, V., unicellular algæ, 1124.
- Jodlbauer, M., determination of sugar by alcoholic fermentation, 994.
- Johannsen, W., continuation of respiration in dead vegetable cells, 741.
- distribution of amygdalin and emulsin in almonds, 869.
- mealy and steely barley, 748.
- Johanson, C. J. See Ekstrand.
- Johnson, G. S., creatinines, 506.
- detection of acetic acid in presence of morphine, 633.
- Johnstone, W., precipitation of hop-bitter by lead acetate, 763.
- Jolin, S., the acids of pig's bile, 1213.
- Joller, A., preparation of potassium manganate, 556.
- Jolles, A., potassium manganite, 229.
- Joly, A. See Debray.
- Joly, J., beryl and iolite of Glencullen, 117.
- harmotome in Wicklow, 116.
- specific gravity determination, 103.
- Jones, E. W. T., examination of starch and wort, 199.
- Juillard, P., diphthalic acid, 707.
- isomeride of orthophenylphthalidecarboxylic acid, 955.
- Juillard, P. See Græbe.
- Julius, P., dinaphthyl-derivatives, 161.
- Julius, P. See also Jacobsen.
- Jungfer, P., determination of traces of bismuth and antimony in commercial copper, 324.
- Jungfleisch, E., and L. Grimbert, levulose, 1266.
- Jungfleisch, E., and E. Léger, cinchonibine, 969.
- — cinchonigine, 612.
- — cinchoniline, 729.
- — derivatives of cinchonine, 507.
- — optical isomerides of cinchonine, 380.
- Jurisch, K. W., decomposition of ammonium chloride by phosphoric acid, 650.
- Just, L., injury to vegetation by sulphurous acid, 318.
- Juttke, J., water of crystallisation of alums, 112.

## K.

- Kablukoff, I., butallyl methyl pinacone, 1170.
- derivatives of hexyl glycerol, 1171.
- the laws governing the reactions of direct addition, 1154.
- Kalischer, S., apparent manifestation of chemical as mechanical attraction, 1242.
- effect of light on the conductivity of selenium, 99.
- Kallir, J., water of crystallisation of dissolved cobalt salts, 23.
- Kalman, W. See Gläser.
- Kapf, S., and C. Paal, ethyl phenacylbenzoylacetate, 839.
- Karpinsky, A., metamorphic graphite: garnet in the Ural mountains, 115.
- Kassner, G., decomposition products of panicle, 1183.
- elementary analysis of highly volatile organic liquids, 197.
- millet oil and some of its products of decomposition, 673.
- Kast, A., the output of chlorides in its relation to metabolism, 513.
- Katzer, F., minerals from new localities in Bohemia, 922.
- Kaulfuss, A., apparatus for distilling zinc methyl and zinc ethyl, 255.
- Kawakita, M. See Divers.
- Kay, P., antimony potassium oxalate, 675.
- Kayser, H., disintegration of glowing platinum, 1014.
- Kebler, J. T., and T. H. Norton, acenaphthene and chlorine, 961.
- Kegel, O., isomeric naphthyl phenyl ketone, 1307.
- Kehrmann, F., action of alkali nitrites on halogen-derivatives of quinones, 940.
- di-iodophenolsulphonic acid, 842.

- Kehrmann, F., iodophenolsulphonic acids, 595, 841.  
 — phosphotungstates and arsenotungstates, 788.  
 Kehrmann, F. See also Nietzki.  
 Kekulé, A. See Busz.  
 Kelbe, W., retene from resin oil, 605.  
 Kellner, O., relative nutritive value of fat and carbohydrate, 173.  
 Kellner, O., and T. Yoshii, development of free nitrogen in putrefaction and nitrification, 185.  
 Kemp, J. F., diorite dyke in Orange Co., New York, 1045.  
 Kennepohl, G., estimation of phosphoric acid in basic slag, 321.  
 Kessler, A. See Gorbhoff.  
 Ketteler, E., refraction of liquids between wide limits of temperature, 541.  
 Kiener. See Engel.  
 Kiesewetter, P., and G. Kruss, absorption-spectra of the rare earths, 1038.  
 Kiliani, H., action of hydrocyanic acid on galactose, 581.  
 — double lactone of metasaccharic acid, 46.  
 — metasaccharic acid, 821.  
 King, C. M., fat extraction apparatus, 1134.  
 Kingzett, C. T., atmospheric oxidation of turpentine, camphor oil, and oil of sunflower, 605.  
 Kipping, F. S., synthetical formation of closed carbon-chains in the aromatic series, *TRANS.*, 21.  
 Kirk, R., alcaptonuria, 1121.  
 Kislakowski. See Sabanéeff.  
 Kissell, J., action of zinc ethyl on nitroethane, 436.  
 Klason, P., alkyl polysulphides, 356.  
 — preparation of sulphides and hydrosulphides of methyl and ethyl, 356.  
 Klaudy, J. See Morawski.  
 Kleber, C., action of ethyl sodiomalonnate on chloromethyl ether, 1056.  
 Klein, C., and P. Jannasch, ullmannite from Lölling and from Sarrahus, 31.  
 Klément, C., ilmenite from the Ardennes, 430.  
 — meteorite of Saint-Denis-Westrem, 238.  
 — rocks from the Congo, 34.  
 — water from artesian wells, 239.  
 Kriebahn, G., recognition of pyrogallol, 198.  
 — separation of resins, 761.  
 Klien, G., value of nitrogen in sodium nitrate and in ammonium sulphate, 872.  
 Klingemann, F. See Japp.  
 Klinger, H., and A. Maassen, sulphines and the valency of sulphur, 357.  
 Klobb, T., permanganates, 230.  
 Klobbie, E. A., nitramine from mesidine, 466.  
 Klobbie, E. A. See also Franchimont.  
 Klobukoff, N. v., new apparatus for electrochemical research, 769.  
 — safety retort for preparing gases, 1244.  
 Kloos, J. H., martinite from the West Indies, 233.  
 Klopsch, R., determination of the oil in linseed cake, 1349.  
 Klotz, C.,  $\alpha$ -amidolepidine, 1113.  
 Klüsse, K., dithionates, 784, 1156.  
 Knap, F., ultramarine-blue, 1163.  
 Knapp, L., testing for santonin, 1137.  
 Knecht, E., dyeing of wool and silk with basic coal-tar dyes, 832.  
 Knieriem, W. v., cellulose in the nutrition of herbivorous animals, 515.  
 Knöfler, O., and P. Boessneck, condensation of chloral hydrate with tertiary aromatic amines, 267.  
 Knoevenagel, E., bidesyls, 706.  
 — negative nature of organic radicles, 705.  
 Knop, A., action of phosphorus pentasulphide on aniline, 265.  
 Knop, W., determination of ammonia in arable soils, 533.  
 Knops, C., molecular refraction of fumaric and maleic acids, &c., 938.  
 Knorr, L., identity of phenylmethylpyrazoloneazobenzene with phenylhydraziniketophenylmethylpyrazolone, 724.  
 — syntheses with ethyl acetoacetate, 1111.  
 Knorr, L., and H. Laubmann, pyrazoles and pyrazolines, 725.  
 Knorre, G. v., and P. Olschewsky, antimoniates, 231.  
 Knorre, G. v., and E. Oppelt, pyrophosphates, 413.  
 Koch, L., direct assimilation of vegetable remains by chlorophyll-containing plants, 739.  
 Koch, R., the Vienna gravimetric method for estimating tannin in concentrated solutions, 1138.  
 Kock, E., aromatic nitroso-bases, 469.  
 Köbrich, A., estimation of ash in organic substances, 325.  
 König, G. A., manganese-zinc-serpentine from Franklin, New Jersey, 565.  
 — schorlemite, a variety of melanite, 434.

- König, G. A., stromeyerite from Zaccatecas, Mexico, 560.
- König, J., maintenance and increase of the amount of combined nitrogen on the farm, 523.
- Koenig, T., and O. v. d. Pfordten, titanium, 788.
- König, W., orthohydroxyquinaldine-carboxylic acid, 610.
- Koenigs, W. See Heymann.
- Koenigs, W. J. See Comstock.
- Körner, A., derivatives of phenyldibromoisobutyric acid, 368.
- Körner, G., and A. Menozzi, derivatives of isosuccinic acid, 132.
- Körner, M. E. G., and V. Wender, new benzene-derivatives, 1278.
- Kohler, L., benzylidene compounds, 49.
- metahydroxyparanitrosodiphenylamine, 587.
- Kohlrausch, F., theory of the electrolysis of solutions, 1231.
- Kokscharoff, N. v., mürsinskite, 116.
- Kondakoff, J., action of chlorine on amylene, 123.
- methyl isopropenyl carbinol, 125.
- tertiary ethyl amyl ether, 802.
- Koninck. See De Koninck.
- Koningh. See De Koningh.
- Konowaloff, D., action of acids on tertiary amyl acetate, 1053.
- decomposition of liquid tertiary amyl acetate, 340.
- formation and decomposition of ethereal salts: compounds of amylene (trimethylethylene) with acids, as cases of chemical equilibrium, 1167.
- theory of liquids, 1019.
- Konovaloff, M., hexahdropseudo-cumene and its relation to non-naphthene, 679.
- Koosen, J. H., property of the alkalis of increasing the E.M.F. of zinc, 209.
- Kopp, H., molecular heat of solid compounds, 893.
- Kössel, A., adenine, 303.
- new vegetable base, 1114.
- Kossovich, P., citric acid in *Oxycoccus palustris*, 314.
- Kost, G., modification of the methyl-violet reaction for the detection of free hydrochloric acid in gastric juice, 996.
- Kostanecki, S. v., dinitroresorcinol, 263.
- dyes which can be fixed with mordants, 274.
- synthesis of anthracoumarins from cinnamic and metahydroxybenzoic acids, 291.
- Kotoff, A. See Salkowski.
- Kowalewsky, N., action of alloxantin on blood, 732.
- Krafft, F., benzene-derivatives of high molecular weight, 1087.
- isolation of the higher normal paraffins from lignite petroleum, 1047.
- ricinoleic acid, 1270.
- Krandauer, influence of manures on the composition of barley, 870.
- Krasnicki, E. v., solubility of calcium and barium formates, acetates, and propionates, 359.
- Kratschmer, apparatus for nitric acid determination, 193.
- Kraus, C., manuring hops, 319.
- Krauss, J. See Claus.
- Kraut, K., indirect determination of alkalis in presence of lithium, 195.
- nickel ammonium oxalate, 788.
- Kravkoff, N., obtaining non-organised ferments in pure aqueous infusions, 862.
- Kreiling, P., occurrence of lignoceric and arachidic acids in earth-nut oil, 578.
- Kremel, A., estimation of caffeine in guarana, 876.
- estimation of emetine, 1351.
- estimation of morphine in opium, 635.
- Kretschmar, C. See Schmitt.
- Kreusler, U., assimilation and expiration of plants, 186, 742.
- Kreuzhage, C. See Wolff.
- Krohn, C., hydroxy- $\beta$ -isodurylic acid, 594.
- Krohn, C. W. See Möhlau.
- Królikowski, S., and M. Nencki, behaviour of orthohydroxyquinoline-carboxylic acid and its derivatives in the organism, 864.
- Kronberg, H., incineration of organic substances, 993.
- Krüger, F., coagulation of fibrin, and intravascular clotting, 305.
- resistance of hæmoglobin towards different decomposing agents, 510.
- Krüss, G., atomic weight of gold, 345.
- new source of germanium, 345.
- relations between the composition and absorption-spectrum of organic compounds, 1141.
- Krüss, G., and L. Nilson, components of the rare earths yielding absorption-spectra, 208, 390.
- Krüss, G., and F. W. Schmidt, halogen-compounds of gold, 28, 1256.
- Krüss, G. See also Hoffmann.
- Kiesewetter.
- Kruis, J. See Raymann.

- Krukenberg, C. F. W., chemical formation of albumin, 73.  
 Kubierschky, K. See Feit.  
 Kühn, B., and E. Henschel, substituted biurets, 474.  
 Küster, F. See Zincke.  
 Kundt, A., refractive indices of the metals, 997.  
 Kunz, G. F., mineralogical notes, 346.  
 — some American meteorites, 353.  
 — the Powder Mill Creek meteorite, 353.  
 Kunz, H., morphine hydriodide, 855.  
 — the constituents of *Acorus calamus*, 1221.  
 Kunz, J., bacteriological and chemical investigation of some bacilli, 1122.  
 Kurz, H. See Claus.  
 Kusseroff, R. See Löscher.  
 Kutschig, C. v., reaction product of phosphorus pentasulphide and carbamide, 1064.  
 Kuvsinoff, J., action of zinc methyl on valeraldehyde, 125.

## L.

- Laborde and Magnan, toxic action of alcohols and artificial bouquets, 737.  
 Laborde and A. Riche, physiological action of nickel salts, 738.  
 Lachowicz, B., constants of benzene, 1068.  
 — piperidine dyes, 1314.  
 Lachowicz, B., and F. Bandrowski, compounds of organic bases with metallic salts, 1281.  
 La Coste, W., and F. Valeur,  $\beta$ -quinolinedisulphonic acid, 297.  
 Lacroix, A., albite in Norwegian pegmatites, 236.  
 — anorthite from Saint Clément, 432.  
 — identity of dreelite and barytes, 33.  
 — two varieties of goethite from Saône et Loire, 563.  
 Ladd, E. F., changes occurring in Timothy grass (*Phleum pratense*), 1220.  
 — sugars and starch in fodders, and their determination, 748.  
 Ladenburg, A., constitution of benzene, 1181.  
 —  $\gamma$ -picoline and  $\gamma$ -pipercoline, 498.  
 Ladenburg, A., and J. Abel, ethylenimine (spermine), 441, 1268.  
 Ladureau, A., and Mousseaux, wheat experiments in 1887, 353.  
 Lafont, J., action of acetic acid on citrene, 718.  
 — action of acids and anhydrides on terpenols, 845.  
 — action of formic acid on French terebenthene, 495.  
 Lafont, J. See also Bouchardat.  
 Lainer, A., hydroxylamine hydrochloride in quantitative analysis, 1313.  
 Laist, A., and T. H. Norton, copper antimonide, 658.  
 Landolt, H., nitrication of ammonium salts, 1328.  
 — polaristrobometric analysis, 386.  
 Landwehr, H. A., animal gum, 175.  
 Lang, J., reactions occurring in the preparation of water gas and heating gas, 1029.  
 Lang, W., action of pyridine on metallic salts, 850.  
 Langbein, G., analysis of nickel, 531.  
 Lange, acidity of cell sap, 744.  
 Lange, G. See Lellmann.  
 Lange, M., action of sulphur on the salts of aromatic hydroxy-compounds, 375.  
 — sulphonation of acetophthalide, 160.  
 Langley, J. N., influence of atropine on salivary secretion, 1216.  
 Langley, J. W., apparent manifestation of chemical attraction as mechanical attraction, 1009.  
 Latham, P. W., blood changes in disease, 1324.  
 Latieu, determination of free oxygen in water, 874.  
 Latschenberger, J., formation of the colouring matter of gall, 620.  
 Latschinoff, P., empirical formula of cholic acid, 303.  
 Laubmann, H., compounds of phenylhydrazine with ketone alcohols, 366.  
 — 1:5-diphenylpyrazoline, 726.  
 Laubmann, H. See also Knorr.  
 Lauch, R. See Einhorn.  
 Laurent, E., formation of glycogen in beer-yeast, 981.  
 — formation of starch by plants from organic solutions, 1126.  
 Laurie, A. P., constitution of copper-zinc and copper-tin alloys, TRANS., 104.  
 Lawes, J. B., and J. H. Gilbert, sources of nitrogen in vegetation, 745.  
 Lawson, A., and N. Collie, action of heat on salts of tetramethylammonium, TRANS., 624.  
 Lawson, A. T. See Zincke.  
 Lea, M. C., action of light and reducing agents on silver salts: formation of photo-salts, 1.



- Lea, M. C., combination of silver chloride with metallic chlorides, 109.
- Le Blanc, M., isoquinoline and its derivatives, 1114.
- Lechartier, G., the freezing of ciders, 188.
- Le Chatelier, H., constitution of hydraulic cements, 1030.
- laws of chemical equilibrium, 548, 549, 782.
- molecular heats of gases, 213, 772.
- oxidation of silver, 651.
- Leclerc, A., cutaneous excretion of albumin by the horse, 1320.
- Lecremier, A. See De Koninck.
- Lecrenier, A. See Spring.
- Ledermann, B., tetrabenzylphosphonium-compounds, 475.
- Legal, acetone in urine, 1346.
- Léger, E. See Jungfleisch.
- Lehmann, F. See Pfeiffer.
- Lehmann, O., crystallisation of mixtures, 342.
- Lehnkering, P. See Einhorn.
- Leidié, E., rhodium salts, 1256.
- rhodium sesquichloride, 790.
- rhodium sesquisulphide, 919.
- Leipen, R., compounds of ethylidene-lactic acid, 580.
- Lellmann, E., piperylene nitrogen chloride, 970.
- Lellmann, E., and W. Geller, derivatives of tertiary phenylpiperidine, 1107.
- — formation of colouring matters from paramidophenylpiperidine, 1108.
- — piperidine, 970.
- — tertiary phenylpiperidine, 1107.
- Lellmann, E., and G. Lange, quino-line, 296.
- Lellmann, E., and H. Reusch, pseudoquinolineanitrile, 499.
- Lellmann, E., and O. Schmidt, ring formation with elimination of hydrogen bromide or nitrous acid, 289.
- Lenard, P., and M. Wolf, luminescence of pyrogallol, 1000.
- Lenz, L., determination of nitrogen by Kjeldahl's method, 193.
- Lépine, R., action of acetophthalide and dihydroxynaphthalene on blood, 184.
- Lépine, R., and E. Porteret, secretion of urine when pressure is exerted on the urinary canals, 1321.
- Leplay, H., formation of organic acids, nitrogenous compounds, and potassium nitrate in beetroot, 868.
- Lepsius, B., lecture experiment for demonstrating the valency of metals, 410.
- Lepsius, B., water from the Tönnisteiner medicinal spring, 435.
- Leroy, A. J., bromobenzenes, 258.
- Lesser, E., separation and determination of arsenic, antimony, and tin, 754.
- Leube, W., new pathological colouring matter in urine, 179.
- Levallois, A., effect of chemical manures on the composition of soja, 870.
- Lévy, L., alloy of titanium, silicon, and aluminium, 423.
- estimation of titanic oxide, 196.
- zinc titanates, 27, 1254.
- Levy, S., and A. Andreocci, action of phosphorus pentachloride on ethyl succinosuccinate, 840.
- — dichloroterephthalic acid and dichlorodihydroterephthalic acid, 1091.
- Levy, S., and P. Engländer, oxidation of copaiba balsam, 133.
- Levy, S., and K. Jedlička, tetrachlorinated diacetyl, 443.
- Lewkowsitch, J., rotatory power of benzene-derivatives, TRANS., 781.
- Lewy, M., action of acid amides on bromacetophenone, 55.
- bases from bromacetophenone and acetamide, 593.
- oxazoles and their derivatives, 1101.
- Liebenberg, v., manuring barley, 189.
- manuring oats, 189.
- manuring of winter wheat and winter rye, 189.
- Liebermann, C., a new dihydroxy-anthraquinone: hystazarin, 1203.
- isatropylcocaine, 1210.
- leuco-compounds from anthraquinone dyes, 492, 717.
- methyloxanthranol, 715.
- new apparatus, 1155.
- spectra of the alkoxyanthraquinones, 1203.
- therapeutic substitutes for chrysarobin, 518.
- thiophen reaction with nitrous sulphuric acid, 325.
- Liebermann, C., and G. Jellinek, ethylated hydroxyanthraquinones, 715.
- Liebermann, L., animal dextran, 177.
- nucleïn from yeast: artificial preparation of nucleïn from albumin and metaphosphoric acid, 510.
- Liebrich, O., the dead space in chemical reactions, 1242.
- Liebscher, G., supply of food constituents at different periods of plant growth, 382.

- Lietzmann, E., permeability of vegetable membranes for air, 1023.
- Limb, C. See Maumené.
- Limpach, L., laws of substitution of the aromatic amines, 464.
- methylation of symmetrical metaxylidine, 464.
- Limpach, L. See also Conrad.
- Linck, G., the basalts of Alsace, 567.
- Lindet, L., action of chlorine on gold, 919.
- bases in alcoholic liquids, 634.
- influence of temperature on the production of higher alcohols by fermentation, 1263.
- Lindner, P., new lactic ferment occurring in malt wort, 622.
- Lindo, D., estimation of potash in commercial manures, 89.
- Griess' sulphanilic acid test for nitrous acid modified, 1340.
- phenol, &c., as tests for nitrites, nitrates, and chlorates, 1337.
- preservation of solutions of hydrogen sulphide, 750.
- tests for Fahlberg's "saccharin," antipyrine, and antifebrin, 1350.
- Linossier, G., localisation of barium in the organism after chronic poisoning with a barium salt, 183.
- spectroscopic examination of blood, 1139.
- Lintner, C. J., diastase, 497.
- Lippmann, E., ethyl hydroxyquinoline carbonate, 164.
- Lippmann, E., and F. Fleissner, phenoldicarboxylic acids, 1092.
- Lippmann, E. O. v., catechol in raw beet-sugar, 262.
- organic constituents of beet-root juice, 314.
- Lissenko, K., decomposition of petroleum by heat, 436.
- List, R. See also Fahlberg.
- Living, G. D., and J. Dewar, spectrum of the oxyhydrogen flame, 637.
- Locher, M., action of potassium ferrocyanide on diazobenzene nitrate, 589.
- Lochert, H., acetals of normal propyl glycol, 935.
- action of bromine on the compounds of glycol with aldehydes, 671.
- compounds of glycol with some aldehydes, 670.
- Lockyer, J. N., spectra of meteorites, 638.
- Lodsinsky, reactions in secondary coils, 1141.
- Lodter, W. See Bamberger.
- Loeb, M., molecular weight of iodine in its solutions, *TRANS.*, 805.
- Loeb, M., use of aniline as an absorbent of cyanogen in gas analysis, *TRANS.*, 812.
- Löschner, K., action of bromine on iodoform, 436.
- Löschner, K., and R. Kusseroff, action of aniline on bromofumarimide, 1281.
- Loew, O., condensation of formaldehyde, 358.
- formose and methylenitan, 571.
- sugar-like nature of formose, 245.
- unorganised ferments, 607.
- Loew, O., and T. Bokorny, chemico-physiological study of algæ, 315.
- presence of albumin in cell fluid, 983.
- Lorenz, N. v., analysis of materials containing tartaric acid, 327.
- discrimination of phosphoric acid of mineral origin from that of animal origin in artificial manures, 1340.
- Lorenz, R., valency of boron, 1246.
- Lorin, action of some organic acids on ethyl oxalate, 937.
- inosite, 245.
- Losanitsch, S. M., Servian coal, 31.
- Lossen, W., boiling points and specific volumes, 335.
- representation of atoms in space, 218.
- Lossen, W., and F. Mierau, action of nitrous acid on some organic bases, 684.
- Lott, F. E., Heisch's method for detecting sewage contamination in water, 533.
- Louguinine, W., heat of combustion of the solid isomeric of benzene, 893.
- heats of combustion of fumaric, maleic, and the pyrocitric acids, 893.
- Louis, H., bismutite from the Transvaal, 31.
- Louise, E., and L. Roux, vapour-density of aluminium methyl, 583.
- Louise, E. See also Roux.
- Love, E. F. J., comparing spectra, 542.
- Lovett, R. W., strychnine poisoning, 1217.
- Loviton, separation and estimation of antimony and tin, 992.
- Lowmann, O. See Claisen.
- Lowndes, F. K. See Hodgkinson.
- Lucas, L., anthracene hydride, 1201.
- Lüdeking, C., anomalous density of liquid bismuth, 790.
- chemistry of combustion, 1263.
- Lüders. See Weppen.
- Lunge, G., determination of sulphur in pyrites, 85.
- improved form of nitrometer, 526.

- Lunge, G., theory of the vitriol-chamber process, *Proc.*, 3.  
 Lupton, S., compounds of chromium, *Proc.*, 81.  
 Lussana, S. See Bellati.

**M.**

- Maassen, A. See Klinger.  
 Macadam, W. I., natural and artificial manures, 625.  
 McArthur, J. See Dittmar.  
 McCaleb, G. F., titanite oxide in soils, 745.  
 McCay, L. W., determination of arsenic as pentasulphide, 528.  
 McCulloch, N., estimation of iodine, 526.  
 — volumetric estimation of iodine in presence of bromine and chlorine, 626.  
 Mach, E., lime and ash in Tyrolean and other wines, 1332.  
 — percentage of sulphuric acid in plants destroyed by sulphurous anhydride, 745.  
 Machado, J., petrography of the south-western Brazilian frontier between Minas and S. Paulo, 926.  
 MacIvor, R. W. E., a New Zealand sulphur island, 427.  
 — chrome iron ore in Australia, 428.  
 — exhaustion of the virgin soils in Australasia, 523.  
 — gold, alunite, and sulphur from New South Wales: native antimony from Queensland, 560.  
 — occurrence of epsomite on White Island, New Zealand, 563.  
 MacMunn, C. A., chromatology of sponges, 619.  
 — hæmatoporphyrin, 304.  
 — urohæmatoporphyrin and allied pigments, 614.  
 Magerstein, V. T., addition of wood-ashes to superphosphates, 749.  
 Magnan. See Laborde.  
 Magnanini, G., acetyl-compounds of methylketole and scatole, 957.  
 — action of acetic anhydride on levulinic acid, 819.  
 — conversion of methylketole into quinaldine, 957.  
 Magnanini, G. See also Ciamician.  
 Malbot, amines of the paraffin and benzene series, 41.  
 Malbot, H., propylene iodide, 1262.  
 Malfatti, H., and P. Schoop, determination of vapour-densities at low pressure, 336.  
 Mallard, E., crystalline compounds prepared by Ebelen, 348.  
 Maly, R., oxidation of albumin with permanganate, 1120.  
 Manasse, O., action of amyl nitrite on nitrosoketones, 1088.  
 Maneuvrier, G., and J. Chappuis, electrolysis with alternating currents, 1005.  
 Mangini, F., chalybeate water of Rafanelo, 1261.  
 Manning, I. H., decomposition of potassium cyanide, 930.  
 Manning, I. H., and G. W. Edwards, salts of camphoric acid, 963.  
 Maquenne, derivatives of saccharic and mucic acids, 676.  
 — galactosecarboxylic acid, 580.  
 — perseite, 807.  
 Marcato, V., peptonic fermentation of meat, 1318.  
 Marchand, F., toxic action of chlorates, 977.  
 Marck, B. v. d., picrotoxin, 848.  
 Markwald, W., fufuralmalonic acid, 678.  
 — fufuran-derivatives, 135, 677.  
 — trithioacetaldehyde, 127.  
 Margottet, J. See Hautefeuille.  
 Markownikoff, W., dihydrothenardite, a new mineral, 794.  
 — method for avoiding "bumping" in distillation, 1155.  
 — occurrence of thenardite in Russia, 793.  
 Marpmann, alantonic acid and alantole, 378.  
 Marquardt, A., alkyl-derivatives of bismuth, 1066.  
 Marquardt, A., and A. Michaelis, ethyl telluride, 1066.  
 Marshall, H., cobaltic alums, 557.  
 Marshall, W. See Purdie.  
 Martin, S. H. C., detection of proteids in urine, 763.  
 Martin, S. H. C., and D. Williams, influence of bile on digestion, 618.  
 Martinoff, B., and S. Shukoffsky, action of ethyl iodide and zinc, and of allyl iodide and zinc, on ethereal malonates, 820.  
 Mason, W. P., ash in bones of different ages, 80.  
 Massol, G., heat of neutralisation of malonic acid, 1240.  
 — potassium and sodium malonates, 1239.  
 Mathéus, J., a new quinolinequinone, 965.  
 — J., azo-dyes of the hydroxyquinolines, 851.  
 Mathias, E., measurement of the

- latent heat of vaporisation of liquefied gases, 773.
- Matteucci, V. See Pellizzari.
- Matthews, F. G., action of nitric acid on ammonium chloride, *Proc.*, 102.
- Matthey, E., metallurgy of bismuth, 656.
- Maumené, E. J., inactose of neutral sugar, 668.
- Maumené, E. J., and C. Limb, method for obtaining definite hydrates, 644.
- Mauzelius, R., action of sulphuric acid on  $\alpha$ -naphthylamine hydrochloride, 375.
- alkyl salts of sulphacetic acid and ethylenedisulphonic acid, 821.
- naphthalenesulphonic acid [1:4'], 376.
- Maximovitch, J., antiseptic properties of naphthols, 621, 978.
- Mayer, A., analyses of rubbish heaps employed to improve soils, 191.
- Mayer, F. See Tollens.
- Mays, T. J., action of brucine and strychnine, 312.
- Meerson, S., an isomeride of oximido-naphthol, 1200.
- derivatives of diamido- $\alpha$ -naphthol, 713.
- Mehne, P., condensation of furfuraldehyde with chloraldehyde, 453.
- nitrosotoluidines, 463.
- Meineke, C., determination of iron by nitroso-naphthol, 1132.
- estimation of manganese as sulphide, 1132.
- determination of phosphorus in iron by molybdate, 1130.
- Meister, J., condensation of urethane with ethyl acetoacetate, 675.
- Meixner, A. See Claus.
- Meldola, R., displacement of the amidogroup by the acetyl-group by aid of the diazo-reaction, 487.
- Meldola, R., and F. J. East, researches on the constitution of azo- and diazo-compounds: compounds of the naphthalene  $\beta$ -series, *TRANS.*, 460.
- Meldola, R., and E. R. Moritz, Kjeldahl's method of estimating nitrogen, 628.
- Meldola, R., and E. H. R. Salmon, amines and amides derived from the nitrilines, *TRANS.*, 774.
- Meldola, R., and W. F. Streatfeild, constitution of azo- and diazo-derivatives and diazoamido-compounds, *TRANS.*, 664.
- Melikoff, P., action of hypochlorous acid on angelic acid, 1177.
- Melikoff, P., and N. Zelinsky, ethyl glycidate 1056.
- Mellon, W. W., free acid in superphosphates, 527.
- Mendeléeff, D., specific gravity of sulphuric acid solutions, 343.
- Mengarini, F., effects of an electric current on wine, 188.
- Menzio, A. See Koerner.
- Menschikoff, P., action of zinc chloride and zinc iodoethide on dipropyl ketone, 248.
- Mensching, J., and V. Meyer, pyrometer, 331.
- Menschutkin, N., rate of formation of ethereal salts, 105, 901.
- Merck, E., furfurethenepyridine, 1314.
- Mering. See Cahn.
- Merrill, G. P., new meteorite from California, 1046.
- Messinger, J., and C. Engels, action of hydrogen phosphide on aldehydes and ketonic acids, 441.
- Mester, B., scatoxylsulphuric acid and scatole-pigment, 174.
- Metzeler, K., iodine-derivatives of quinone, 1278.
- Meunier, J., combination of mannitol with benzaldehyde, 950.
- compounds of mannitol, 1049.
- mannitol dibenzoate, 1265.
- Meunier, S. See Dollfus.
- Meunier-Dollfus. See Scheurer-Kestner.
- Meurer, V., support for funnels while drying, 192.
- Mewes, W., halogen substitution products of ethyl acetoacetate and their behaviour with sodium ethoxide, 817.
- Meyer, A., phenylacetic acid and benzyl cyanide, 693.
- Meyer, E. v., action of sodium on homologues of ethyl cyanide, 800.
- formation of cyanethine from ethyl cyanide, 802.
- hydrocyanic acid and cyanogen iodide, 242.
- Meyer, E. v. See also Schmidt.
- Meyer, G., thermal alteration in a Daniell cell and in an accumulator, 393.
- Meyer, H., derivatives of dimethyl- $\alpha$ -resoreylic acid, 148.
- Meyer, L., oxygen carriers, 216.
- preparation of hydrogen iodide, 219.
- Meyer, R., benzeneazomalonic acid, 369.
- Meyer, V., constitution of mixed azo-compounds, 366.
- Geuther's views on the constitution of the nitro-derivatives of the fatty hydrocarbons, 570.

- Meyer, V., lecture experiments with nitrogen chloride, 343.
- molecular weight of sulphur, 1028.
- negative nature of organic radicles, 147, 702.
- orthocyanophenol, 266.
- preparation of  $\beta$ -iodopropionic acid, 360.
- question of the existence of true nitroso-compounds, 147.
- Raoult's method of determining molecular weights, 407.
- remarks on Biltz' paper on the molecular weight of sulphur, 1028.
- remarks on Japp and Klingemann's paper on the constitution of certain so-called mixed azo-compounds, *Proc.*, 79.
- stability of mercuric chloride solutions, 228.
- thio-derivatives of deoxybenzoin and its analogues, 484.
- Meyer, V., and L. Oelkers, negative nature of organic radicles: examination of deoxybenzoin, 703.
- Meyer, V., and E. Riecke, the carbon atom and valency, 549.
- Meyer, V. See also Auwers, Biltz, Braun, Demuth, Grünwald, Mensching.
- Meysztowicz, W., pyrosulphites, 344.
- Michael, A., a criticism on "The arrangement in space of the atoms in the molecule of organic compounds," 1147.
- action of ethyl sodomalonate on resorcinol, 956.
- constitution of ethyl sodacetate, 1054.
- constitution of ethyl sodacetate and ethyl sodacetomalonate, 674.
- constitution of levulinic and maleic acids, 134.
- Michael, A., and G. M. Palmer, anilides of unsaturated polybasic acids, 461.
- Michael, A., and H. Pendleton, alioisomerism in the crotonic acid series, 1176.
- Michaelis, A., and U. Genzken, tritolylstibines, 145.
- Michaelis, A. See also Marquardt, Schenk.
- Michailoff, V., coagulation of albumin, 73.
- detection and estimation of indican and its homologues in urine, 880.
- Michaud, G., cyclamin, 496.
- Michel, L., formation of crystallised selenates in the dry way, 650.
- Mierau, F. See Lossen.
- Mierisch, B., volcanic blocks of Monte Somma, 434.
- Miers, H. A., and G. T. Prior, proustite containing antimony, 657.
- Miesler, J., distribution of electromotive force in the cells of batteries, 330, 392.
- electromotive dilution constants, 13.
- Milch, A. See Otto.
- Milliau, E., detection of cotton-seed oil, 633.
- detection of cotton-seed oil in olive oil, 1349.
- detection of sesame oil in olive oil, 1349.
- Miller, W. v., action of sulphur on quinaldine, 966.
- Millot, A., oxidation of the azulmic matter obtained by the electrolysis of ammonia with carbon electrodes, 242.
- Milne, J. M., determination of ammonia, 195.
- extraction of fats by Soxhlet's apparatus, 95.
- notes on Nesslerising, 87.
- Miniati, T., H. Booth, and J. B. Cohen, fractional reduction of ortho- and para-nitrotoluene and analysis of ortho- and para-toluidine, 202.
- Minunni, G., action of paratoluidine and of aniline on phloroglucinol, 1081.
- Mittelbach, F., uric acid in the urine of herbivora, 1215.
- Mixter, W. G., and F. O. Walther, nitro-derivatives of oxanilide, 141.
- Mixter, W. G., and C. P. Willcox, nitro-derivatives of dibromoxanilide, 142.
- Möhlau, R., identity of diphenyldiisindole and 3' phenylindole, 483.
- Möhlau, R., and C. W. Krohn, action of sulphur on methylaniline and dimethylaniline, 364.
- Möller, M., quinaldine alkyl iodides, 298.
- tetrahydroquinaldine, 297.
- Mörner, C. T., micro-chemical observations on hyaline cartilage, 860.
- Mörner, K. A. H., pigments of melanotic sarcomata, 518.
- Mohler, J., pyridine bases from coal tar, 727.
- Moissan, H., ethyl fluoride, 1262.
- hydrofluorides of potassium fluoride, 553.
- Molcanoffski, N., hydrazocumic acid, 277.
- Molinari, E. See Goldschmidt.

- Monari, A., change of chemical composition of muscle by fatigue, 174.  
 ——— formation of xanthocreatinine in the organism, 174.  
 Monari. See also Giacosa.  
 Monheim, determination of starch in grain, 1134.  
 Moody, G. T., metaxylenesulphonic acids, *Proc.*, 77.  
 Moore, G. D. See Jackson.  
 Moore, T., separation of iron, nickel, cobalt, manganese, zinc, and aluminium, 631.  
 Morawski, T., and M. Gläser, action of citraconic acid on naphthylamine, 1096.  
 Morawski, T., and J. Klaudy, chlorine and bromine-derivatives of citraconanil, 53.  
 Morel, J. See Hogounenq.  
 Morgan, J. J., estimation of silicon in iron and steel, 195.  
 Morgan, J. J., and others, estimation of sulphur in iron and steel, 1334.  
 Morgues. See Gautier.  
 Morin, E. See Claudon.  
 Morin, E. C., bases formed by alcoholic fermentation, 572.  
 ——— brandy from a wine from the Charente Inférieure, 125.  
 ——— normal amyl alcohol from the fermentation of glycerol by *Bacillus butylicus*, 125.  
 Morin, H., essence of rosewood, 1308.  
 Moritz, E. R. See Meldola.  
 Moritz, J., and P. Seucker, manuring of vines, 190.  
 Morley, E. W., atomic weight of oxygen, 649.  
 ——— moisture remaining in a gas after drying it with phosphoric anhydride, 192.  
 Morris, G. H. See Brown.  
 Morse, H. N., and W. M. Burton, analysis of butter, oleomargarin, &c., 1347.  
 ——— atomic weight of zinc, 1247.  
 ——— estimation of butter in milk, 537.  
 ——— removal of iodate from iodide of potassium, 1246.  
 ——— separation and determination of boric acid, 755.  
 ——— supposed dissociation of zinc oxide: atmosphere within a platinum vessel heated by a bunsen flame, 652.  
 Moscatelli, R., lactic acid of the thymus and thyroid, 860.  
 Moscatelli, R. See also Colasanti.  
 Moscheles, R., and H. Cornelius, tetric acid and its homologues, 1272.  
 Moser, J., increase of photoelectric currents, 9.  
 ——— resolution of electromotive forces of galvanic elements into their differences of potential, 209.  
 Mosso, physiological action of cocaine, 864.  
 Mosso, U., chlorophenols, 456.  
 Mosso, U. See also Aducco.  
 Mourgues, L. See Gautier.  
 Mousseaux. See Ladureau.  
 Muck, F., determination of antimony, 197.  
 Mühlhäuser, O., manufacture of rosaniline, 472.  
 Müller, F., presence of hydrogen sulphide in urine, 178.  
 Müller, H. See v. Pechmann.  
 Müller, K., manuring experiments with oats, 525.  
 Müller, M., action of water on lead, 225.  
 Müller, R. See Bamberger.  
 Müller, W., chiasolite, 566.  
 Müller-Erzbach, W., determination of vapour-pressure from the rate of evaporation, 1016.  
 ——— dissociation of copper sulphate, 104.  
 ——— dissociation of crystallised lead acetate and sodium thiosulphate, 213.  
 ——— dissociation of some alums and of sodium acetate, 1022.  
 ——— equilibrium in the retention of water by dilute sulphuric acid and hydrated salts, 1024.  
 Müllner, F. See Donath.  
 Muir, M. M. P., and R. H. Adie, interaction of zinc and sulphuric acid, *TRANS.*, 47.  
 Muir, M. M. P. See also Gott.  
 Mulder, E., constitution of paracyanogen and cyamelide, 1046.  
 ——— urethane and some of its derivatives, 1063.  
 Munro, J. M. H., formation of nitrites during the nitrification of ammoniacal solutions, 82.  
 Munroe, C. E., metallic felt filters, 1333.  
 Muntz, A., water of the Nile, 1261.  
 Muter, J., and L. de Koningh, assay of commercial carbolic compounds, 92.  
 Mylius, F., cholic acid, 508.

## N.

- Naccari, A., specific heats of some metals, 1236.  
 Nadeschdin, A., expansion of fluids

- and change of substances from the liquid to the gaseous state, 775.
- Nahrwold, R., conduction of electricity through gases, 769.
- electrification of a gas by a glowing platinum wire, 1231.
- Nantier, A., experimental plots at La Somme, 1127.
- Narr, F., conductivity of electricity through gases, 397.
- Nasini, R. See Paternò.
- Nasmyth, T. G., air of coal mines, 1026.
- Nebelthau, E., lactic acid in the urine of cold-blooded animals after extirpation of the liver, 1323.
- Nef, J. U., carboxyl-derivatives of benzoquinone, *TRANS.*, 428.
- Negreano, determination of the velocity of etherification by means of electrical conductivity, 1025, 1243.
- Nencki, M., and N. Sieber, animal melanin, 976.
- — — hematoporphyrin, 971.
- Nencki, M. See also Królikowski.
- Nernst, W., heat of formation of mercury compounds, 1012.
- Nernst, W. See also Ettingshausen.
- Nettlefold, F., dye from seaweed, 1313.
- Neubeck, F., molecular volumes of aromatic compounds, 895.
- Neuberg, O. See Traube.
- Neumann, E., pathological pigments, 864.
- Neumann, G., apparatus for quantitative analysis, 1332.
- double salts of sesquichlorides with other metallic chlorides, 655.
- estimation of thallium, 529.
- methods for obtaining constant streams of hydrogen chloride, ammonia, and nitrogen, 784.
- valuation of crude sodium acetate, 1346.
- Neumeister, R., albumoses: peptones, 509.
- physiological action of albumoses and peptones, 516.
- Newall, H. F., recalcence of steel, 892.
- Newall, H. F. See Thomson.
- Ney, E., deoxybenzoïn and desaurins, 1197.
- Nicol, W. W. J., specific gravities of aqueous glycerol solutions, 437.
- Niementowski, S., metahomo-anthranilic acid, 837.
- Niementowski, S., and B. Rozanski, nitrotoluic acids, 1038.
- Nietzki, R., and J. Diesterweg, disazo-compounds, 1082.
- Nietzki, R., and A. L. Guitermann, quinonedioximes, 471.
- Nietzki, R., and F. Kehrman, hydroxyquinones, 263.
- Nietzki, R., and R. Otto, action of quinonedichlorimide on naphthylamine, 843.
- — — indamines and indophenols, 949.
- — — safranines and dyes related thereto, 831.
- Nietzki, R., and A. W. Schmidt, benzenetriphenazine, 690.
- — — nitrogenous quinone-derivatives, 943.
- Nietzki, R., and F. Schmidt, dihydroxyquinone and tetrahydroxybenzene, 1181.
- Nilson, L. F., variations in the fat of milk, 861.
- Nilson, L. F., and O. Pettersson, two new chlorides of indium and the vapour-density of indium, gallium, iron, and chromium chlorides, *TRANS.*, 814.
- — — vapour-density of aluminium chloride and the valency of metals of the aluminium-group, 788.
- Nilson, L. F. See also Krüss.
- Nölting, E., substitution in azo-compounds, 270.
- Nölting, E., and A. Abt, constitution of azimido-compounds, 273.
- Nölting, E., and F. Binder, diazo-amido-compounds, 271.
- Nölting, E., and T. Stricker, iodophenols, 262.
- Nordenskiöld, A. E., arksutite from Ivigtut, Greenland, 231.
- kainosite from Hitterö, Norway, 234.
- Norton, L. M., and H. A. Richardson, linoleic acid, 44.
- Norton, T. H., metallic nitroprussides, 932.
- Norton, T. H., and A. H. Otten, amine salts of paratoluenesulphonic acid, 698.
- — — apparatus for fractional distillation, 646.
- Norton, T. H., and T. W. Schmidt, metallic salts of benzenesulphonic acid, 697.
- Norton, T. H., and E. Twitchell, alloys of calcium and zinc, 651.
- Norton, T. H., and J. H. Westenhoff, action of silicon tetrafluoride on acetone, 936.
- — — amine salts of benzenesulphonic acid, 698.
- — — bromination of acetone, 936.
- Norton, T. H. See also Carson, Kebler, Laist.

## O.

- Obermeyer, J., methyl mercaptan and its derivatives, 124.  
 Oelkers, L. See Meyer.  
 Oettel, B. F., lecture experiment, 910.  
 Oettel, F., analysis of German silver, 323.  
 Oettingen, A. v., and A. v. Gernet, explosion of water gas, 549.  
 Ogliandolo, A., synthesis of phenoxy-coumarin, 277.  
 Olivieri, V., constitution of quassin, 1311.  
 Olschewsky, P. See v. Knorre.  
 Oppelt, G. See v. Knorre.  
 Orndorff, W. R. See Remsen.  
 Osann, A., labrador-porphyrins of the Vosges, 569.  
 — sandinites from São Miguel, 566.  
 Osborne, T. B., filtering "crude fibre" and silver chloride, 1351.  
 Oestermayer, E., iodophenolsulphonic acids, 596.  
 Ostersetzer, O., apparatus for the direct estimation of carbonic anhydride, 322.  
 Ostwald, W., chromic acid, 1009.  
 — electrochemical studies, 331.  
 — nature of chemical affinity, 338.  
 — studies in chemical dynamics, 1024.  
 — study of contact electricity, 886.  
 — theory of solution, 1020.  
 — theory of the dissociation of electrolytes, 1142.  
 Ott, I., and C. Collmar, albumoses, peptone, and neurine as pyrexial agents, 1325.  
 Otte, R. See Pechmann.  
 Otten, A. H. See Norton.  
 Otto, H., soluble phosphates in superphosphates, 553.  
 Otto, R., action of carbonyl chloride on sodium formate, 672.  
 — analogy between ketonic acids and the alkyl-sulphones of the fatty acids, 360.  
 — formation of monosulphones, 482.  
 — methylenechlorophenylsulphone, 483.  
 Otto, R., and R. C. Casanova, disulphones, 255.  
 Otto, R., and A. Milch, synthesis of aromatic sulphinic anhydrides, 281.  
 Otto, R., and W. Otto, action of alkaline sulphinates on trihalogen substituted hydrocarbons, 841.  
 — action of ethyl chlorocarbonate on salts of fatty and aromatic acids, 813.  
 — analogy between alkyl sulphonated fatty acids and ketonic acids, 577.

- Otto, R., and W. Otto, sulphoneketones, 282.  
 Otto, R., and A. Rössing, butanedicarboxylic acids, 45.  
 Otto, R. See also Nietzki.  
 Ouvrard, L., action of alkaline phosphates on the alkaline earths, 1033.  
 — double phosphates in the magnesium-group, 1035.  
 — phosphates of the cerite metals, 1037.

## P.

- Paal, C., and C. Strasser, synthesis of pyridine and piperidine derivatives, 62.  
 Paal, C. See Kapf.  
 Papecke, V., substitution in benzoïn and in analogues of desoxybenzoïn and benzyl cyanide, 701.  
 Pagliani, S., crystallisation of salts during the electrolysis of their solutions, 892.  
 Pagnoul, A., richness and density of wheat, 1128.  
 Pajkull, G. See Bäckström.  
 Pajkull, L., mucin of bile, 169.  
 Pailhade. See de Rey Pailhade.  
 Painter, H. M. See Chittenden.  
 Palladin, W., formation of organic acids in growing plants, 1126.  
 — the rôle of oxygen in plant life, 1125.  
 Palm, R., chemical nature of the peptones, 972.  
 — detection of picrotoxin in beer, &c., 877.  
 Palmer, A. W., and C. L. Jackson, pentamidobenzene, 825.  
 Palmer, A. W. See also Hill.  
 Palmer, G. M. See Michael.  
 Palmieri, L., production of electricity by the condensation of aqueous vapour, 99.  
 Parmentier, F. See Chancel.  
 Patein, G., cyanogen compounds of sulphines, 664.  
 Paternò, E., and R. Nasini, molecular weight of citraconic, itaconic, mesaconic, fumaric, and maleic acids, 1059.  
 — molecular weight of sulphur, phosphorus, bromine, and iodine in solutions, 1027.  
 Pattinson, J., rate at which bleaching powder loses its available chlorine when kept at different temperatures, 552.  
 Paul, B. H., cocaine and its salts, 1118.



- Paul, B. H., and A. J. Cownley, estimation of theine in tea, 539.
- Pawlewski, B., action of chloracetone on diphenylthiocarbamide, 473.
- thiophen, 1068.
- Pearson, K., a certain atomic hypothesis, 902.
- Pechmann, H. v., constitution of glutazine, 67.
- decomposition of isonitroso-compounds, 146.
- decomposition of nitrosoketones, 248.
- diacetyl and its homologues, 248.
- $\alpha$ -diketones, 811.
- osazones, 1287.
- Pechmann, H. v., and H. Müller, aromatic diketones, 1087.
- Pechmann, H. v., and R. Otte, homologues of diacetyl, 1052.
- Peile, H., analysis of Shotley Bridge Spa water, 569.
- Pellacani, P., and G. Bertoni, physiological action of ethyl lactate, 309.
- Pellizzari, G., compounds of alloxan with aromatic amines, 142, 681.
- isomeric phthalophenylhydrazines, 54.
- Pellizzari, G., and V. Matteucci, amidosulphonic acids, 1302.
- Pendleton, H. See Michael.
- Penfield, S. L. and F. L. Sperry, triclinic feldspars, 350.
- Penfield, S. L., and E. S. Sperry, howlite, 116.
- Perkin, A. G., and W. H. Perkin, jun., derivatives of anthraquinone, TRANS., 831.
- Perkin, W. H., sen., apparatus for maintaining a constant pressure when distilling under reduced pressure, TRANS., 689.
- chlorofumaric and chlormaleic acids and the magnetic rotatory power of some of their derivatives, TRANS., 695.
- magnetic rotatory power of some of the unsaturated bibasic acids and their derivatives: and also of mesityl oxide, TRANS., 561.
- Perkin, W. H., jun., synthetical formation of closed carbon chains. I. Derivatives of hydrindonaphthene and tetrahydronaphthalene, TRANS., 1.
- Perkin, W. H., jun. See also Colman, Freer.
- Perrey, A. See Hautefeuille.
- Perry, J. See Ayerton.
- Pesci, L., action of potassium nitrite on ferric chloride, 1252.
- Péter, action of oils on polarised light, 760.
- Petermann, A., application of potassium chloride to sugar beet on heavy soil, 1128.
- estimation of sugar in beet, 994.
- organic nitrogenous manures, 990.
- waste products as manures, 749.
- Peters, C. See Will.
- Peters, T., action of ammonia on alkylated acetoacetates, and of alcohol on the carbonyl-group in acetoacetates, 253.
- Petersen, A. S. F., ethereal oil of *Asarum Europæum*, 680.
- Petersen, F. C., pyrrolidine, 498.
- Petit, P., heat of formation of aniline, 773.
- heat of formation of toluidines, benzylamine, and methylaniline, 1239.
- thermochemistry of nitrogen-derivatives of benzene, 1013.
- Petschow, G. See Döbner.
- Petterson, O. See Nilson.
- Pfeiffer, E., conductivity of pure water and its temperature coefficients, 11.
- Pfeiffer, T., estimation of urea by titration, 539.
- Pfeiffer, T., and F. Lehmann, fat equivalent of starch, 973.
- Pfitzinger, W.,  $\alpha$ - $\gamma$ -dimethylparatoluquinoline, 1207.
- Pflüger, E., titration of urea with mercuric nitrate, 201.
- Pfordten, O. v. d., lowest oxide of silver, 221, 1029.
- mercurous oxide, 1037.
- Pfordten, O. v. d. See also Koenig.
- Phipson, T. L., determination of phosphoric acid in contaminated waters, 533.
- rhinanthin, 1310.
- Piccini, A., fluorine-derivatives of peritanic acid, 1255.
- new oxide of thallium, 110.
- titanium trioxide, 789.
- Pickering, S. U., constancy in the heat produced by the reaction of certain salts on each other, 333.
- constitution of basic salts, 111.
- heat of dissolution of substances in various liquids, TRANS., 865.
- nature of solution, 22.
- nature of solutions as elucidated by the heat evolved on their dilution. Part I. Calcium chloride, PROC., 35.
- solution, 21.
- thermochemical constants, PROC., 52.
- Pictet, A., and P. Crépieux, alkylformanilides, 688.
- Pictet, A., and L. Duparc, ethylindole, 370.

- Pictet, A., and L. Duparc, formation of secondary aromatic amines, 364.
- Pictet, R., determination of the specific weight and vapour-pressure of mixtures of sulphurous and carbonic anhydrides, 1015.
- Pinette, J., boiling points and specific volumes of phenols and their ethers, 335.
- Pingel, C., methyl propiopropionate, 819.
- Pinner, A., action of carbamide on hydrazines, 687, 1084.  
— hydantoins, 1102.
- Pirngruber, H., separation of platinum from rare metals, 656.
- Pisenti, G., physiological action of thallin, 311.
- Pitsch, O., are nitrates indispensable to the growth of field crops? 84.
- Piutti, A., synthesis of aspartic acid, 677.
- Planchon, V., estimation of glycerol by oxidation, 1345.
- Planck, M., chemical equilibrium in dilute solutions, 780.  
— hypothesis of the dissociation of salts in very dilute solutions, 1144.  
— molecular constitution of dilute solutions, 895.  
— vapour-tension of dilute solutions of volatile substances, 1146.
- Planta, A. v., food of larval bees, 733.
- Plath, H., nitrification of ammonia and its salts, 521.
- Plöchl, J., reaction of formaldehyde, 1051.
- Plugge, P. C., opium alkaloids, 378.
- Pohl, estimation of globulin, 878.
- Poincaré, L. See Bouty.
- Poleck, T., and C. Goercki, chlorosulphides of mercury, 1166.
- Polis, A., aromatic lead compounds, 283.
- Polko, G., butenyltricarboxylic and ethylsuccinic acids, 134.
- Pollacci, E., methods for detecting vinoline, 877.
- Pollatschek, A., estimation of small quantities of sugar in urine, 995.
- Polonowska, N., oximes of benzil, 485.
- Polonowsky, M., action of phenylhydrazine on dioximes, 366.  
— condensation of glyoxal with ethyl acetoacetate, 1175.  
— condensation of glyoxal with ethyl malonate and acetoacetate, 1067.
- Pomeranz, C., cubebin, 162, 1100.
- Pons, E. See Vanni.
- Popp, G. See Hantzsch.
- Porteret, E. See Lépine.
- Posner, C., detection of albumin, propeptone, and peptone, 1140.
- Pospěchhoff, V., azopseudocumene, 140.  
— orthazotoluene, 825.
- Potilitzin, A., mutual substitution of the halogens in their compounds with oxygen, 220.  
— products and rate of decomposition of the salts of halogen oxy-acids by heat, 219.
- Pouchet, A. G., compounds of phenoxides with cuprous and mercurous chlorides, 586.
- Pratt, J. H., experiments with Lippmann's capillary electrometer, 639.
- Preis, K., arsenic compounds, 914.
- Prevost, E. W., injury to plants by kiln smoke, 744.
- Přibram, R., influence of inactive substances on the specific rotatory power of tartaric acid, 1229.  
— — on the polaristrobometric estimation of grape-sugar, 1133.
- Přibram, R. See also Schuster.
- Přibytek, S., action of hypochlorous acid on the hydrocarbon  $C_8H_6$ , 123.  
— diisobutenyl oxide, 244.  
— erythrene dioxide, 245.
- Price, R. C., tscheffkinite, 661.
- Pringsheim, E., chemical action of light on a mixture of chlorine and hydrogen, 205.
- Pringsheim, N., dependence of assimilation of green cells in their respiration of nitrogen, 186.  
— production of oxygen by green cells, 741.
- Prior, G. T. See Miers.
- Procter, H. R., gravimetric estimation of tannin, 96.
- Proskowitz, E. v., manuring sugar-beets with basic slag, 319.
- Prost, E., colloidal cadmium sulphide, 653.  
— extraction of lead from residues obtained in the manufacture of zinc, 915.
- Pulfrich, C., refraction of light by ice and by water cooled below zero, 881.
- Pum, G., unsaturated acids, 1058.
- Purdie, T., and W. Marshall, action of alcohols on ethereal salts in presence of small quantities of sodium alkyl-oxides, *TRANS.*, 391.
- Puschl, C., highest boiling point of liquids, 17.  
— relation of gases to Marriotte's law at high temperatures, 547.  
— relations of gases to the laws of Marriotte and Gay-Lussac, 16.

Puschl, C., relation of hydrogen to Marriotte's law, 18.

Q.

Quantin, H., action of carbon tetrachloride on inorganic chlorides, 785.  
Quincke, F., nitro-derivatives of ace-naphthene, 843.  
Quinquaud. See Grehant.

R.

Rabe, H., turbine for laboratory purposes, 647.  
Racine, S., derivatives of orthophth-aldehydic acid, 693.  
Raich, S., decomposition of ammonium salts by bromine-water, 1024.  
Raikow, P.,  $\alpha$ -methyleinnamic acid, 369.  
Rake, B., cultivation of *Bacillus lepræ*, 1124.  
Rammelsberg, C., atomic weight of yttrium metals in their natural compounds, 112.  
— composition of idocrase, 431.  
— eudialite, 234.  
— manganese and uranium oxides, 232.  
Ramsay, W., molecular weights of nitrogen trioxide and nitrogen peroxide, TRANS., 621.  
Ramsay, W., and S. Young, evaporation and dissociation: continuous change from the gaseous to the liquid state at all temperatures, 18.  
Raoult, F. M., cryoscopic studies on racemic acid and racemates, 361.  
— freezing point of dilute aqueous solutions, 1242.  
— vapour-tensions of ethereal solutions, 1145.  
Raschig, F., compound of iodine with ammonia, 26.  
— preparation of the alkali salts of hydroxylaminedisulphonic acid and of hydroxylamine, 913.  
Rathgen, F., determination of sugar in liqueurs, confectionery and chocolate, 1345.  
Rathke, B., cyanuric derivatives of taurine, 582.  
— methyl chlorothioformate: polymeric thiocarbonyl chloride, 1169.  
— phenylisocyanuric acid: a fourth triphenylmelamine, 591.  
Rattner, C., negative nature of organic radicles, 704.  
Raulin, J., agricultural experiments, 85.

Rawson, C., detection and estimation of magenta in orchil and cudbear, 877.  
— valuation of indigoes, 761.  
Rayleigh, Lord, densities of hydrogen and oxygen, 643.  
Rayman, B., rhamnose (isodulcitol), 1049.  
Raymar, B., and J. Kruis, isodulcitol, 667.  
Reale, N., compounds extracted from *Anagyris foetida*, 188.  
Rebs, H. sulphur compounds, 1155.  
Rebuffat, O., reactions of chloral, 127.  
Reese, L., action of phthalic anhydride on amido-acids, 148, 369.  
— ash determination, 758.  
Reformatsky, A., synthesis of diethyl methyl carbinol, 244.  
Reformatsky, S., new synthesis of dihydric monobasic acids from ketones, 819.  
Regnard, P., influence of the age of yeast on the alcoholic fermentation, 184.  
Reher, L., ethylquinoline, 66.  
Reichardt, E., action of potable waters on lead pipes, 344, 554.  
Reicher, L. T., temperature of conversion of copper calcium acetate, 360.  
Reimann, K. See Janovsky.  
Reinhardt, C., determination of small quantities of manganese in iron rich in silicon, 1132.  
— titanium nitrocyanoide, 1047.  
Reinhardt, H. See Wislicenus.  
Reinitzer, F., cholesterin, 1076.  
Reinke, J., oxidation in the plant, 741.  
Reis, M. A. v., action of aqueous carbonic anhydride on basic slag, 222.  
Reissert, A., condensation products from  $\beta$ -anilido-acids, 276, 694.  
— constitution of pyranilpyroic acid, pyranilpyroin-lactone, and anilsuccinic acid, 954.  
Reissmann, A., bumping during distillation, 547.  
Remsen, I., and C. W. Hayes, sulphonefluorescein, 153.  
Remsen, I., and W. R. Orndorff, decomposition of diazo-compounds, 268.  
Renard, A., diterebenthyl, 161, 721.  
— hydrocarbons in resin oils, 846.  
Reusch, H. See Lellmann.  
Reuter, F. See Anschütz.  
Reverdin, F. See de la Harpe.  
Reynolds, E. J., action of bromine on potassium ferricyanide, TRANS., 767.  
Reynolds, J. E., action of silicon tetra-

- bromide on allyl- and phenyl-thiocarbamides. Action of ethyl alcohol on the compound  $(\text{H}_4\text{N}_2\text{CS})_8\text{SiBr}_4$ , *TRANS.*, 853.
- Rey Pailhade. See de Rey Pailhade.
- Riban, J., estimation and separation of zinc, 1343.
- Richards, T. W., atomic weight of copper, 917.
- heat produced by the reaction of silver nitrate with solutions of metallic chlorides, 400.
- relation of the atomic weights of silver and copper, 916.
- Richards, T. W. See also Cooke.
- Richardson, H. A. See Norton.
- Richardson, W. H., new phenylhydrazine salts, 1286.
- probable orthoquinone derived from anthraquinone, 1308.
- Richarz, F., constitution of peroxides, 769.
- electrolytic formation of persulphuric acid and hydrogen peroxide at the anode, 769.
- formation of hydrogen peroxide at the anode during the electrolysis of dilute sulphuric acid, 12.
- Riche, A. See Laborde.
- Richet, C. See Gley, Hanriot.
- Richter, L., oil of *Lallemantia iberica*, 83.
- Richter, V. v., chromogenic carbins: constitution of rosaniline salts, 1185.
- new chromogenic groups, 1189.
- Ridsdale, C. H., determination of vanadium, 628.
- simplified chromometer, 625.
- Riecke, E. See Meyer.
- Riggs, R. B., an iron of doubtful origin, 121.
- composition of tourmaline, 659.
- new meteoric iron, 121.
- so-called indicolite from Harlem, 351.
- Righi, A., rotation of isothermic lines of bismuth placed in a magnetic field, 102.
- thermic conductivity of bismuth in a magnetic field, 102.
- Rigollet, H. See Gouy.
- Ris, C., action of catechol on alkylene-diamines, 468.
- derivatives of di- $\beta$ -naphthylamine, 57.
- Rischbieth, P., isonitrosogalactose, 40.
- isonitrosovaleric acid and  $\gamma$ -valeroloximidolactone, 44.
- Rizza, B., camphor from the ethereal oil of *Ledum palustre*, 845.
- Rizza, B., and A. Boutlerow, asarone, 458.
- Roberts, galvanic elements, 639.
- Robinson, F. C., blue clay from Farmington, Maine, 352.
- so-called Northport meteorite, 662.
- Robinson, W. S. See Jackson.
- Rocques, X., detection of impurities in alcohols, 993.
- Rodatz, P. See Stohmann.
- Rodewald, H., estimation of the heat and of the carbonic anhydride given out by parts of plants, 979.
- Rodger, J. W. See Thorpe.
- Röhrig, A., sulphites, 649.
- Röntgen, W. C., and J. Schneider, compressibility of dilute salt solutions and of solid sodium chloride, 22.
- compressibility of sylvan, rock salt, and aqueous solutions of potassium chloride, 1019.
- compressibility of water, 548.
- Röse, B., determination of alcohol, 1133.
- determination of fat in milk, 1135.
- Rössing, A. See Otto.
- Rössler, H., determination of silver in alloys of silver and copper, 755.
- occurrence of oxide of cobalt, 658.
- Rössler, O., detection of small amounts of carbonic anhydride and other gases, 88.
- Romanese, R. See Bellati.
- Romburgh. See Van Romburgh.
- Rondeau, P. See Gley.
- Roos, J., thio-derivatives of quinoline, 500.
- Roosen, O. See Behrend.
- Roozeboom, H. W. B., astrakanite and hydrated double salts, 1164.
- hydrates of gases, 897.
- the different forms of heterogeneous chemical equilibrium, 1147.
- triple and multiple points regarded as transition points, 1151.
- Roque, G. See Teissier.
- Rosenheim, J., amount of acid in the stomach on an amylaceous diet, 617.
- Rosenheim, T., acids in healthy and disordered stomach during a carbohydrate diet, 972.
- Roser, W., action of strong sulphuric acid on diphenylsuccinic acid, 1301.
- indene-derivatives, 1303.
- methylindenecarboxylic acid, 1303.
- narcotine, 1115, 1316.
- Roser, W., and E. Haseloff, dibromindone-derivatives, 1314.
- Roth, J., zobtenite, 661.

- Rousseau, G., and J. Bernheim, crystallised hydrated potassium ferrite, 1252.  
 ——— decomposition of barium ferrate at high temperatures, 1034.  
 ——— formation of crystalline ferric hydroxides in the dry way, 917.  
 Roux, L., application of the-aluminium chloride method to the naphthalene-series, 1305.  
 Roux, L., and E. Louise, vapour-density of aluminium ethide, 453.  
 Roux, L. See also Louise.  
 Roux, P. See Dubois.  
 Rozanski. See Niementowski.  
 Rückel, J. See Eckenroth.  
 Rücker, A. W., the range of molecular forces, *TRANS.*, 222.  
 Rüdorff, F., calcium copper acetate, 446.  
 ——— constitution of solutions, 342, 899.  
 Rügheimer, L., and C. S. Schramm, action of phosphorous pentachloride on aniline ethylmalonate and orthotoluidine ethylmalonate, 502.  
 Ruffle, J., correct analysis of superphosphates, 387.  
 ——— moisture and free acid in superphosphates and similar fertilisers, 87.  
 Ruhemann, S., action of ammonia on alkyl salts of fatty acids, 255.  
 ——— amide of dihydroxyisonicotinic acid, 728.  
 Ruhemann, S., and D. J. Carnegie, action of acetone on ammonium salts of fatty acids in presence of dehydrating agents, *TRANS.*, 424.  
 Ruhemann, S., and W. J. Elliott, isonitrile of phenylhydrazine, *TRANS.*, 850.  
 Ruhemann, S. See also Skinner.  
 Russmann, A., separation of barium, strontium, and calcium, 629.  
 Rutgers, J., nutritive value of vegetable proteïds compared with animal proteïds, 515.

## S.

- Sabanéeff and Kislakowski, colorimetric determination of minimal quantities of iron, 757.  
 Sabatier, P., hydrochloride of cobalt chloride, 1041.  
 ——— hydrochloride of cupric chloride, 1036, 1037.  
 ——— rate of transformation of metaphosphoric acid, 404.  
 Sachse, H., additive derivatives of dianthranyl, 718.  
 ——— configuration of the benzene molecule, 1181.  
 ——— derivatives of dianthranyl, 1201.  
 Saglier, A., combinations of aniline with copper salts, 941.  
 Saint-Edme, E., passivity of iron and nickel, 788.  
 St. Martin. See de St. Martin.  
 Salkowski, E., behaviour of benzoic anhydride in the organism, 864.  
 ——— colour reactions of proteïds, 508.  
 ——— examination of cod-liver oil and vegetable oil, 201.  
 ——— ferment from putrefactive bacteria which dissolves fibrin, 1326.  
 ——— has creatinine basic properties? 505.  
 ——— Hoppe-Seyler's soda-test for carbonic oxide hæmoglobin, 540.  
 ——— peculiar modification of urobilin, 73.  
 ——— spontaneous decomposition of bilirubin, 520.  
 Salkowski, E. and A. Kotoff, influence of phenylacetic acid on proteïd metabolism, 513.  
 Salmon, E. H. R. See Meldola.  
 Salomonson, H. W., nitrophenyl-paraconic acid, 480.  
 ——— Perkin's reaction, 476.  
 Salzer, T., behaviour of some acids towards chromic acid and permanganate, 996.  
 Sambuc, iron in wine, 384.  
 Samek, J., manuring of clover, 1223.  
 Sanarelli, G., absence of uric acid and alkaline reaction in the urine of carnivora, 178.  
 Sandberger, F., mineral veins, 237.  
 Sandberger, F. v., new mineral in the St. Bernard lode at Hausach, 561.  
 Sanson. See Hénninger.  
 Sanson, J. See Fauconnier.  
 Sarrau and Vieille, chemical equilibrium of homogeneous gaseous systems, 339.  
 Sauer, A., minerals in granulite, 34.  
 Savin, M., alkaline and acid albumin-derivatives, 858.  
 Saytzeff, M., C. Saytzeff, and A. Saytzeff, isoleïc acid, 815.  
 Schacht, C., estimation of iron, 631.  
 Schäfer, L., estimation of cinchonidine in quinine sulphate, 636.  
 ——— testing neutral quinine salts, 636.  
 Schall, C., determination of vapour-densities, 325.  
 ——— solid orthiodophenol, 262.  
 Schall, C., and C. Dralle, new brazilin-derivatives, 295.

- Scharizer, R., micas of the pegmatite-granite of Schüttenhofen, 432.
- Scheffer, J. D. R., experiments on the diffusion of aqueous solutions, 1144.
- Schenk, A., and A. Michaelis, derivatives of dimethylaniline containing phosphorus and mercurydimethylaniline, 834.
- Scheurer-Kestner, heat of combustion of coals from the North of France, 774.
- Thompson's calorimeter, 750.
- Scheurer-Kestner and Meunier-Dolfus, an English coal, 845.
- Schiff, H., compounds of sugars with aldehydes and acetones, 572.
- isomerides of tannic acid, 840.
- Schiff, H. See also Bargioni.
- Schiff, R., specific heat of liquid carbon-compounds, 14, 771.
- Schimper, A. F. W., formation of calcium oxalate in leaves, 981.
- Schindler, C., volumetric determination of molybdenum and lead, 757.
- volumetric determination of phosphoric acid, 753.
- Schlagdenhauffen, F. See Heckel.
- Schlaugk, M. See Dürkopf.
- Schloesing, T., estimation of carbon and nitrogen in vegetable soils, 1335.
- relation between atmospheric nitrogen and vegetable soils, 747, 870, 1330.
- slow combustion of organic substances, 979.
- Schloesser, H. See Fittig.
- Schmid, C., determination of fat in milk, cream, &c., 1347.
- Schmidt, A. See Nietzki.
- Schmidt, E., alkaloids of *Scopolia hlarnackiana*, 856.
- conversion of hyoscyamine into atropine, 970.
- Schmidt, E., and H. Henschke, alkaloids of *Scopolia japonica*, 856.
- Schmidt, E., and F. Wilhelm, the berberine alkaloids, 1212.
- Schmidt, F. See Nietzki.
- Schmidt, F. W. See Krüss.
- Schmidt, G., and E. v. Meyer, isatoic acid, 371.
- Schmidt, O. See Lellmann.
- Schmidt, T. See Fischer.
- Schmidt, T. W. See Norton.
- Schmitt, C., detection of "saccharin," 996.
- Schmitt, R., and J. Altschul, parahydroxyquinolinecarboxylic acid, 67.
- Schmitt, R., and E. Burkard, naphtholcarboxylic acids, 59.
- Schmitt, R., and F. Engelmann, orthohydroxyquinolinecarboxylic acid, 66.
- Schmitt, R., and C. Kretschmar, paradiphenoldicarboxylic acid, 56.
- Schneider, new manganese ore from Dillenburg, 1260.
- Schneider, A., amides of tribasic fatty acids, 464.
- Schneider, J. See Röntgen.
- Schneider, L., influence of phosphorus on iron, 421.
- new method for the estimation of manganese, 873.
- Schneider, R., action of arsenious sulphide on iodine, 414.
- Schneider, W. C. See Röntgen.
- Schneidewind, W., substitution of inorganic compounds containing negative radicles, 704.
- Schoeller, A., hystazarin, 1203.
- Schön, L., occurrence of oleic acid in earth-nut oil, 578.
- Scholl, R., conversion of ketoximes into pseudonitriles, 443.
- Schoop, P. See Malfatti.
- Schotten, C., conversion of piperidine into  $\delta$ -amidovaleric acid and into oxypiperidine, 1104.
- Schramm, C. S. See Rügheimer.
- Schramm, J., and I. Zakrzewski, spectrum researches on the energy of the action of bromine on aromatic compounds, 9.
- Schreib, H., determination of fat in milk, 1135.
- Schrodt, M., feeding with earth-nut and palm-cake, 174.
- Schrötter, H., action of dilute mineral acids on saccharic acid, 1060.
- Schubert, S. See Hönig.
- Schütt, F., phycophæin, 496.
- polaristrobometric analysis of a mixture of sodium and potassium chlorides, 1341.
- Schukoffsky, S., action of ethyl iodide and zinc on ethyl malonate, 1179.
- Schukoffsky, S. See also Martinoff.
- Schulten. See de Schulten.
- Schultz, G., isomeric naphthylamine-sulphonic acids, 290.
- Schultz, M., 2:6-methylethylpyridine and 2:4-methylethylpyridine, 64.
- Schulze, E., changes which the nitrogenous matter in silage undergoes, 1329.
- detection of saccharose in vegetable substances, 624.
- some nitrogenous constituents of the seedlings of *Soja hispida*, 868.
- Schulze, E., and T. Seliwanoff, presence of saccharose in unripe potatoes, 623.

- chulze, K. E., titration of pyridine bases, 539.  
 Schulze, R., rate of dissociation of hydrated salts, 104.  
 Schumann, A., action of titanium chloride on phenol, 679.  
 Schumoff, G., nitrocymene and azocymene, 469.  
 Schunck, E., supposed identity of rutin and quercetin, TRANS., 262.  
 Schuster, A., electric discharge through gases, 396.  
 Schuster, M., albite of the Kásbek, 432.  
 — braunite from Jakobsberg, 428.  
 Schuster, M., and R. Přibram, beryl from the Ifinger, 432.  
 Schutzenberger, P., synthetical studies on albuminoids and proteids, 971.  
 Schwartz, F., morphological and chemical composition of protoplasm, 983.  
 Schwartz, Y., estimation of lead in tin alloys, 992.  
 Schwarz, C., detection of iodine in urine, 626.  
 Scott, A., composition of water by volume, 411.  
 Scully, J., effect of bismuth on the ductility of silver, 108.  
 Sedlitzky, L., solubility of salts of isovaleric, methylethylacetic, and isobutyric acids, 250.  
 Seegen, J., changes in carbohydrates in the alimentary canal, 171.  
 — from what material does the liver form sugar? 172.  
 Seliwanoff, T., composition of etiolated potato sprouts, 624.  
 Seliwanoff, T. See also Schulze.  
 Sella, A., sellaite, 657.  
 Selmons, F., action of sulphurous acid on periodic acid, 338.  
 Sembritzki, F., succinylamidoxime and its derivatives, 935.  
 Sestini, F., composition of stable manure, 1332.  
 Setlick, B., preparation of nitrogen tetroxide, 913.  
 Seubert, K., atomic weight of osmium, 921.  
 — atomic weight of platinum, 1043.  
 — benzyl chloracetates, 456.  
 Seucker, P. See Moritz.  
 Sewall, H., preventive inoculation of rattlesnake venom, 1326.  
 Seyfert, F., composition of iodide of starch, 1050.  
 — determination of starch by baryta, 1134.  
 Sheldon, S., alternate currents and electrolytes, 769.  
 Shenstone, W. A., and J. T. Cundall, the influence of temperature on the composition and solubility of hydrated calcium sulphate and of calcium hydroxide, TRANS., 544.  
 Shimoyama, Y., chemistry of buchu leaves, 1205.  
 — glutinous rice, 1127.  
 Shukoffsky, S. See Martinoff.  
 Sieber, N. See Nencki.  
 Siegfried, M. See Wislicenus.  
 Sievers, W., crystallised salts of mercury, 419.  
 Sievert, influence exerted by sodium chloride on the digestion of albumin in fodder, 859.  
 Sighicelli, C., physiological action of cocaine, 312.  
 Silber, P. See Ciamician.  
 Sinibaldi, J., estimation of oxygen, carbonic anhydride, and carbonic oxide, 322.  
 Skinner, S., and S. Ruhemann, action of phenylhydrazine on urea and some of its derivatives, 274, and TRANS., 550.  
 Skvortzoff, physiological action of iron, 1325.  
 Smith, E. D., improved method of estimating caffeine in coffee, 539.  
 Smith, E. F., the electrolytic method as applied to iron, 1344.  
 Smith, F. W. See Comey.  
 Smith, W. J., substance containing sulphur formed in cruciferous plants, 869.  
 Smith, J. D. See Teschemacher.  
 Smith, J. H., detection and estimation of organic substances, 90.  
 Smith, W. J. See Thorpe.  
 Smolka, A., allyldiguanidine and its derivatives, 42.  
 — picramates, 52.  
 Smolka, A., and A. Friedreich, new method for the preparation of biguanides: derivatives of phenylbiguanide, 830.  
 Snyders, A. J. C., influence of filters on water, 866.  
 Sobieczky, J., and V. Hölbling, improved wash bottle, 990.  
 Söderbaum, H. G., and O. Widman, preparation and oxidation products of nitrocymene, 1076.  
 Sohst, O., and B. Tollens, crystallised saccharic acid, 820.  
 Sokoloff, E., action of ethyl iodide and zinc on ethyl propyl ketone, 1170.  
 — action of methyl iodide and zinc on ethyl propyl ketone, 1170.  
 — action of zinc isoamyl and zinc isobutyl on aldehyde, 125.

- Sokoloff, E., the hydrocarbons  $C_8H_{16}$  and  $C_9H_{18}$  obtained from methyl dipropyl carbinol and ethyl dipropyl carbinol, 1168.
- Sokoloff, N., action of feeble bases on nitroethane, 797.
- Sollas, W. J., artificial deposition of calcite crystals on the spicules of a sponge, 115.
- Solonina, W., action of feeble mineral acids on allyl alcohol, 806.
- Solovieff, A., application of dialysis to the study of the gelatinous state of albuminoid substances, 856.
- Sondén, K., hygienic air analysis, 192.
- Sorge, K., natural gas of Pennsylvania, 30.
- Sorokin, B., action of aniline on iso-saccharin, 819.
- anilides of glucoses and some of their transformations, 807.
- relation between the constitution and sp. rotatory power of organic compounds, 768.
- Sostegni, L., constituents of rice-starch, 126.
- Spence, J. N., estimation of starch, 632.
- Sperry, E. S. See Penfield.
- Sperry, F. L. See Penfield.
- Spica, M., chemical nature of *Aristolochia serpentaria*, 82.
- Spica, M., and G. Halagian, water supply of Odessa, 35.
- Spica, P., diosmin, 1310.
- examination of oils and wines, 95.
- Spohr, J., influence of neutral salts in chemical reactions, 1025.
- Spong, H. See Birch.
- Spring, W., chemical action between substances in the solid state, 1243.
- compression of the moist powder of solid substances, 1243.
- proportion of carbon and hydrogen in carbonaceous schists, 925.
- rate of the reaction between Iceland spar and hydrochloric acid, 900.
- Spring, W., and G. de Boeck, colloidal copper sulphide, 227.
- soluble manganese oxide, 228.
- Spring, W., and A. Lecrenier, action of chlorine on the sulphides of alcohol radicles: preparation of new chlorine-derivatives, 664.
- constitution of Guthrie's chlorethyl bisulphide, 664.
- Spring, W., and J. H. Van't Hoff, chemical decomposition produced by pressure, 341.
- Spring, W., and C. Winssinger, ac-
- tion of chlorine on sulphonic and oxythio-derivatives of heptyl, 939.
- Staats, G., photochromatic properties of silver chloride, 1001.
- Stachovsky, O. K., estimation of carbon in arable soils, 534.
- Stadelmann, E., ferments in normal urine, 308.
- formation of ammonia in the pancreatic digestion of fibrin, 512.
- Staedel, W., phenacyl-compounds, 1093.
- Steche, A., derivatives of  $\beta$ -naphth-indole, 284.
- Steche, A. See also Fischer.
- Steinhart, O. J., anisylamines, 51.
- Steinkauler. See Claus.
- Stenger, F., modifications of the absorption-spectra of a substance, 543.
- Sticker, G., influence of the secretion of gastric juice on the quantity of chlorine in urine, 620.
- Stiebel, A. See Claus.
- Stierlin, R., derivatives of ethyl benzoylacetate, 1089, 1298.
- Stockman, R., hygrine, 508.
- physiological action of borneol, 1216.
- Stockman, R. See also Dott.
- Stocks, H. B., iodide of starch, 126, 668.
- Stoehr, C., 3-methylpyridine and 3-methylpiperidine, 63.
- strychninesulphonic acids, 73.
- Stohmann, F., heats of combustion of organic compounds, 1013.
- Stohmann, F., P. Rodatz, and W. Herzberg, heat equivalents of benzoyl compounds, 333.
- Stolba, F., determination of chlorine, 751.
- reduction with lead, 756.
- Stolle, E., metaditolyl, 699.
- Stone, F. B., test for bismuth, 197.
- Stone, G. C., analyses of franklinite, 791.
- Stone, W. E. See Gaus, Tollens.
- Stoney, G. J., logarithmic law of atomic weights, *Proc.*, 55.
- Storch, L., qualitative and quantitative test for resin oils in mineral and lubricating oils, 536.
- Storch, V., fossil milk, 1223.
- Strache, H., propylenediamine and trimethylenediamine, 1172.
- Strasser, C. See Paal.
- Strassmann, H., derivatives of ortho-xylene, 474.
- Streatfeild, F. W. See Meldola.
- Streinz, F., galvanic polarisation, 99, 544.
- Stricker, T. See Nölting.



Strohecker, J. R., process for obtaining the rare earths from the ceriferous Hainstadt clays, 28.  
 Strohl, A. See Billeter.  
 Strohmer, F., buffalo's milk and butter, 976.  
 Stroman, A., crystallised mercurous bromide and iodide, 111.  
 Stuart, C. M., action of phosphorus pentachloride on salicylaldehyde, TRANS., 402.  
 ——— halogen substituted derivatives of benzalmalonic acid, TRANS., 140.  
 Stuart, C. M., and W. J. Elliott, action of chromium oxychloride on ortho-substituted toluenes, TRANS., 803.  
 Stutzer, A., and A. Isbert, relation of carbohydrates in food to digestive ferments, 170.  
 Stylos, M. See Claisen.

# T.

Tafel, J. See Fischer.  
 Tamm, A., analysis of iron and iron ores, 529.  
 Tammann, G., dynamical method of determining vapour-pressure, 403.  
 ——— influence of small amounts of impurity on the vapour-tension of liquids, 213.  
 ——— occurrence of fluorine in the organism, 732.  
 ——— osmose through precipitated diaphragms, 898.  
 Tanret, bases formed by alcoholic fermentation, 573.  
 Tanret, C., oxidation of hydrazocamphenes, 719.  
 ——— sugars from hesperidin and isohesperidin, 963.  
 Tassinari, V., tobacco and bacteria, 1327.  
 Tatlock, R. R., determination of iron in alum and aluminium sulphate, 90.  
 Taufs, H. See Hatle.  
 Taylor, A. B., easy method of finding the sp. gr. of liquids, 547.  
 Teissier, J., and G. Roque, toxic effects of albuminous urine, 1326.  
 Teschemacher, E. F., and J. D. Smith, estimation of morphine in opium, 635, 1137.  
 Thelen, H. See Zincke.  
 Theurer, C. A., xanthogallol, 1084.  
 Thomas, J. C. A. S., preparation and nitration of dibenzylmalonic acid, 479.  
 Thompson, C. See Wright.  
 Thompson, C. M., and J. T. Cundall,

action of potassium on tetraalkylammonium iodides, TRANS., 761.  
 Thompson, G. R. See Bothamley.  
 Thompson, S. P., electromotive forces of metals in cyanide solutions, 392.  
 Thoms, H., bitter principle of calamus root, 162.  
 ——— constituents of calamus root, 984.  
 Thomsen, J., heat of formation of mercury compounds, 1011.  
 ——— preparation of aurosoauric chloride, 559.  
 Thomson, A. See Carnelley.  
 Thomson, J. J., and H. F. Newall, electric discharge, 400.  
 Thorp, P. See Grissom.  
 Thorpe, T. E., and F. J. Hambly, Chatard's method forestimating small quantities of manganese, TRANS., 182.  
 ——— manganese trioxide, TRANS., 175.  
 ——— vapour-density of hydrofluoric acid, TRANS., 765.  
 Thorpe, T. E., and J. W. Rodger, Potilizin's law of the mutual displacement of chlorine and bromine, PROC., 20.  
 ——— thiophosphoryl fluoride, TRANS., 766.  
 Thorpe, T. E., and W. J. Smith, morindon, TRANS., 171.  
 Thudichum, L. L. W., alkaloïds in human urine, 1119.  
 Tiemann, F., nitrile of salicylic acid, 276.  
 Tilden, W. A., constitution of the terpenes and benzene, TRANS., 879.  
 Tishchenko, W., action of halogen hydrides on oxymethylene, 803.  
 ——— action of halogens on oxymethylene, 804.  
 ——— action of zinc organic compounds on oxymethylene: synthesis of primary alcohols, 804.  
 Tivoli, D., action of hydrogen arsenide on arsenious anhydride, 221.  
 Töhl, A., derivatives of 1:2:3:4 tetramethylbenzene (prehutene), 584.  
 Tönnies, P., action of nitrous acid on anethoil, 264.  
 Tollens, B., and F. Mayer, determination of the molecular weight of raffinose and formaldehyde, 809.  
 Tollens, B., and W. E. Stone, fermentation of galactose, 808.  
 Tollens, B. See also Gaus, Sohst, Wehmer.  
 Tomasini, F. See Cardani.  
 Tomaszewski, F., specific inductive capacity of liquids, 395.  
 Tomiček, F. See Brauner.  
 Tomlinson, H., magnetic properties of nickel, 892.

- Tomlinson, H., recalescence of iron, 546.  
 Tony-Garcin, acidimetry with red wines, 93.  
 Tornier, V. See Claus.  
 Tornøe, H., trimethylene: formation of allyl alcohol from symmetrical dichlorhydrin, 665.  
 Traube, J., the stalagmometer: determination of fusel oil in spirituous liquors, 91, 198.  
 Traube, J., and O. Neuberg, formation of layers in mixtures of alcohol, water and salts or bases, 783.  
 Traube, M., electrolytic formation of hydrogen peroxide at the anode, 210.  
 Traumann, V. See Hantszsch.  
 Trimble, H. See Abbot.  
 Troeger, J., action of sodium on isobutylcyanide and isoamylcyanide, 801.  
 — bases obtained with nascent formaldehyde, 286.  
 Trottarelli. See Verri.  
 Tschacher, O., condensation of metanitrobenzaldehyde with benzene and toluene, 373.  
 Tschirch, influence of sterilisation of soil on the growth of plants, 985.  
 Turner, T., estimation of silicon in iron and steel, 195.  
 — influence of silicon on the properties of iron and steel. Part II. *TRANS.*, 844.  
 Turpin, G. S., septdecylamine, 1174.  
 Tust, P., tetrachlorobenzoic acid from tetrachlorophthalic acid, 836.  
 Twitchell, E. See Norton.

## U.

- Udránszky, L. v., furfuraldehyde colour reactions, 863, 878.  
 — urinary pigments, 180.  
 Udránszky, L., and E. Baumann, benzoic chloride as a reagent, 1296.  
 Uebel, C., ammonia-derivatives of cumaldehyde, 1078.  
 Uljanin, W. v., contact electricity, 390.  
 — electromotive force produced by the action of light on selenium, 883.  
 Ullmann, C., derivatives of triphenylmethane, 288.  
 Ulzer, F. See Benedikt.  
 Urech, F., influence of temperature on the rate of chemical change, 338.

## V.

- Valeur, F. See La Coste.  
 Van Bemmelen, J. M., absorption

- compounds and the absorptive power of the soil, 985.  
 Van Bemmelen, J. M., colloidal alumina and alumina hydrate, 1159.  
 — colloidal chromic oxide, 1162.  
 — colloidal ferric oxide, 1162.  
 — colloidal silica, 1158.  
 — colloidal stannic acid, 1160.  
 — colloids and the water they contain, 1157.  
 — explosion of a tube containing crystals of chromous sulphate, 1041.  
 — germanium oxide, 1041.  
 Van der Cloet, S. See Claus.  
 Van der Plaats, J. D., desiccation of gases, 409.  
 Van Deventer, C. M., and H. L. Van't Hoff, potassium hypiodite, 911.  
 Van Dorp, W. A. See Hoogewerf.  
 Vanni, L., and E. Pons, phosphates in urine, 621.  
 Van Romburgh, P., nitramine derived from tetramethyldiamidobenzophenone, 1196.  
 —  $\beta\beta$ -methyl ethyl propionic acid, 446.  
 — nitramines derived from alkyl aromatic diamines, 1079.  
 — trinitrometaphenylenedimethyldinitramine, 1185.  
 Van't Hoff, J. H., osmotic pressure in the analogy between solutions and gases, 778.  
 — point of transition and point of fusion, 404.  
 Van't Hoff, J. H. See also Spring, Van Deventer.  
 Varet, R., action of zinc cyanide on metallic chlorides, 799.  
 — ammonio-zinc cyanides, 123.  
 Vaughan, V. C., tyrotoxin, 497.  
 Velej, V. H., interaction of metals and sulphuric acid, 104.  
 Venable, F. P., bromination of heptane, 929.  
 Venator. See Isbert.  
 Verneuil, A., phosphorescent blende, 791, 1248.  
 Verneuil, A. See also Fremy.  
 Verri and Trottarelli, calcareous rocks and pozzuolana from Tevere, 120.  
 Vesterberg, A., pimaric acids, 294.  
 Vieille. See Sarrau.  
 Vieth, P., composition of cow's milk, 620.  
 — relation between sp., gr., fat and solids in milk, 634.  
 Vignon, L., dimethylaniline and diphenylamine sulphates, 1282.  
 — estimation of dissolved carbonic anhydride in water, 325.

- Vignon, L., formation of salts of phenyl-enediamine, 1012.  
 — heat of neutralisation of aromatic amines, 1013.  
 — thermochemistry of diazo-derivatives, 774.  
 Vignon, L. See Barbier.  
 Villard, hydrates of gases, 1020.  
 — hydrates of methane and ethylene, 1241.  
 Villard. See also de Forcrand.  
 Villiers, A., new sulphur oxy-acid, 649.  
 — sodium dithiopersulphate, 912.  
 — sodium trithionate, 915.  
 Villon, M., animal tannin, 77.  
 Virtue, W. See Faulkner.  
 Vitali, detection of poisoning by caustic alkalis, 1224.  
 Vitali, D., detection of acetanilide, 1136.  
 Vivier, A., estimation of nitrites, 527.  
 — new hydrate of molybdic acid, 557.  
 Vogel, J. H., estimation of phosphoric acid in basic slag, 991.  
 Vogel, H. W., difference between the colouring matters of bilberry and wine, 1137.  
 — relation between the composition and the absorption spectra of organic dyes, 97.  
 — spectroscopic notes, 1129.  
 Vogt, I. H. L., artificial magnesia-mica, 1260.  
 — tetragonal mineral in crystallised slag, 1259.  
 Voiry, R., essence of cajeput, 962.  
 — essence of *Eucalyptus globulus*, 961.  
 Voiry, R., and G. Bouchardat, oil of spike, 605.  
 Voiry, R. See also Bouchardat.  
 Volhard, J., estimation of sulphurous acid by standard iodine, 192.  
 — preparation of  $\alpha$ -bromo-acids, 129.  
 Vollhardt, G., cobalt ores, 1257.  
 Vortmann, G., action of sodium thiosulphate on cupric salts, 787.  
 — determination and separation of metals by means of sodium pyrophosphate, 755.  
 Vrba, K., cronstedtite from Kuttenberg in Bohemia, 1260.  
 Vries. See de Vries.  
 Vulpius, G., testing chloroform, 632.

W.

- Wacker, L., aromatic nitroso-bases, 466.  
 Wacker, L. See also Fischer.

- Wagner, G., oxidation of olefines and alcohols of the allyl series, 665.  
 Wagner, P., azo- and amido-derivatives of methylketole, 284.  
 — increase in yield of crops by nitrogenous manures, 525.  
 Wagner, R. F., titanium chloride and titanio acid, 557.  
 Wakeman, A. J., solubility of ammonium magnesium phosphate in alcohol, 1131.  
 Wakker, J. H., formation of crystals of calcium oxalate in plant cells, 1126.  
 Walden, P., comparative value of some proposed tests for nitric acid, 321.  
 — determination of the size of the molecules of salts from the conductivity of their aqueous solutions, 891, 1008.  
 Walder, J., colouring matter from anthraquinonedisulphonic acid and sodium nitrite, 961.  
 Walfisz, A. See Gniewosz.  
 Walker, J. See Carnelley.  
 Walker, P. H., genthite, 660.  
 — varvacite, 658.  
 Wallach, O., irisin, 438.  
 — molecular refraction as a means of determining the constitution of members of the terpene-group, 845.  
 — nitrosates, nitrosites, and their derivatives, 37.  
 — terpenes, 60, 1098.  
 — terpenes and ethereal oils, 1204.  
 Wallach, O., and E. Gildmeister, terpenes and ethereal oils, 1205.  
 Wallach, O., and F. Heusler, organic fluorine compounds, 362.  
 Walter, B., influence of concentration on fluorescence, 881.  
 Walther, F. O. See Mixer.  
 Warden, C. J. H., cocatannic acid, 1090.  
 Warington, R., chemical action of some micro-organisms, TRANS., 727.  
 Warnecke, H., wrightine (conessine) and oxywrightine, 855.  
 Warren, H., electrolytic method of preparing metallic alloys, 27.  
 — method for decomposing arsenical sulphides, 26.  
 Warren, H. N., action of sulphur vapour on copper, 555.  
 — bismuth and lithium in iron and slags, 1256.  
 — electrical dialysis, 1235.  
 — estimation of selenium, 527.  
 — fulminates, 1047.  
 — pressure tubes, 646.  
 — selenium in meteoric iron, 435.

- Warren, H. N., separation of tin from antimony, 632.  
 — silicon, 415.  
 — solvent action of Rochelle salt on metallic hydroxides, 1131.  
 Warren, T. T. P. B., action of sulphur chloride on oils, 538, 633, 1348.  
 — new method of examining butter, 199, 538.  
 Washington, H. S. See Hillebrand.  
 Weber, distribution of ash in trees, 742.  
 Weber, J. H. See Hantzsch.  
 Weber, R., influence of the composition of glass on the depression phenomena of thermometers, 641.  
 Websky, M., caracolite and percyllite, 561.  
 Weegmann, R., molecular refraction of some bromine-derivatives of ethane and ethylene, 999.  
 Wegerhoff, P., intramolecular change of phenanthraquinonemonoxime, 1200.  
 Wehmer, C., behaviour of formose in contact with vegetable cells deprived of starch, 739.  
 — the carbohydrate character of formose, 40.  
 Wehmer, C., and B. Tollens, action of boiling acids on methylenitan, 433.  
 — formation of levulinic acid, a reaction for the detection of carbohydrates, 535.  
 Weidel, H., and M. Bamberger, quinoline-derivatives, 966.  
 Weidel, H., and G. v. Georgievics, phenylquinoline-derivatives, 967.  
 Weinberg, A., hydroxydiphenyl bases, 285.  
 — intermolecular migration in  $\beta$ -naphthylaminesulphonic acids, 290.  
 —  $\alpha$ -naphthalenedisulphonic acid, 160.  
 Weiner, J. See Gabriel.  
 Weinschenk, E., alteration of quartz and talc, 1259.  
 Weisbach, A., arnimit, 1259.  
 Weise, B. See Gabriel.  
 Weiske, H., asparagine as a nourishing constituent of food, 80.  
 — does cellulose economise the decomposition of proteid in the nutrition of herbivora? 618.  
 Weiss, F., cheken leaves, 1100.  
 Weissman, G., estimation of manganese in pig-iron and steel, 992.  
 Weld, H. W., analysis of Lockport sandstone, 925.  
 Weller, J., xylolphosphorus compounds and toluphosphonic acids, 835.  
 Wells, H. L., bismuthosyphærite from Connecticut, 346.  
 Wender, V. See Körner.  
 Weppen and Lüders, detection of pyridine bases, 1136.  
 Werenskiöld, F. See Dircks.  
 Wernecke, M., reactions of caffeine and caffeidine, 68.  
 Werner, E. A., chromorganic acids. Part II., chromoxalates, red series, TRANS., 404.  
 — oxidation of oxalic acid by potassium dichromate, TRANS., 602.  
 Werner, H., purification of chloroform, 570.  
 Wessel, R., carbodi-imides of the aromatic series and phenylhydrazine, 1083.  
 Westenhoff, J. H. See Norton.  
 Westermaier, M., physiological signification of tannin in vegetable tissues, 187.  
 Westmoreland, J. W., copper assays, 1343.  
 — determination of sulphur in pyrites, 85.  
 Weyl, T., action of artificial dyes on the animal organism, 1122.  
 — saffron substitutes, 184.  
 — silk, 857.  
 — poisonous properties of dinitrocresol, 520.  
 White, J. T., volumetric estimation of bromine, 1130.  
 — volumetric estimation of sulphuric and phosphoric acids, 751.  
 — volumetric estimation of potassium and sodium, 1130.  
 Whitehouse, H. H. See Chittenden.  
 Whitfield, J. E., natural borates and borosilicates, 347.  
 — the Rockwood meteorite, 352.  
 Wichmann, G. See Gattermann.  
 Widman, O., acetopropylbenzene, acetocumene, and their derivatives, 1085.  
 Widmann, O. See also Abenius, Söderbaum.  
 Weidemann, E., hypothesis of the dissociation of salts in very dilute solutions, 1021.  
 Wien, W., transparency of metals, 1230.  
 Wilber, F. A., gas receiver for absorption analyses, 320.  
 Wilfarth, assimilation of nitrogen by plants, 979.  
 Wilfarth. See also Hellriegel.  
 Wilfarth, H., determination of nitric acid, 1336.

- Wilhelm, F. See Schmidt.
- Will, H., estimation of grape-sugar in urine, 535.
- volumetric estimation of boric acid, 628.
- Will, W., atropine and hyoscyamine, 855.
- constitution of the compound obtained by acting on trimethylpyrogallol with nitric acid, 1089.
- trimethoxybenzenes and the constitution of asarone, 457.
- Will, W., and G. Bredig, conversion of hyoscyamine into atropine, 1316.
- Will, W., and C. Peters, derivatives of isodulcitol, 933.
- Willard, J. T., improved form of gas apparatus, 750.
- Willcox, C. P. See Mixer.
- Willgerodt, C., conversion of ketones and aldehydes into acids and acid amides by means of ammonium sulphide, 476.
- iodation of the phenols by nitrogen iodide, 940.
- hydrazines, 949.
- Willgerodt, C., and M. Ferko, phenylhydrazines, 829.
- Willgerodt, C., and A. Genieser, acetonechloroform, 810.
- Williams, D. See Martin.
- Williams, G. H., pyroxene from New York, 351.
- serpentine from Syracuse, New York, 120.
- Williams, R., analysis of alum cakes, 90.
- determination of morphine in opium, 635.
- estimation of alumina and free sulphuric acid in alum cake and sulphate of alumina, *Proc.*, 84.
- estimation of sodium hydroxide in soda ash, 89.
- Wilm, T., potassium platinocyanide, 931.
- Windisch, W., detection of aldehyde, 1346.
- estimation of lactic acid, 199.
- Wing, J. F. See Jackson.
- Winkelmann, A., anomalous dispersion produced by glowing vapours, 207.
- Winkler, C., fire-damp, 663.
- preparation of hydrogen sulphide free from arsenic, 220.
- Winssinger, C., colloidal state of sulphides, 11.
- propane-derivatives, 243.
- Winssinger, C. See also Spring.
- Winter, H., levulose, 438.
- Wislicenus, J., action of phthalyl dichloride on ethyl sodomalonate, 149.
- arrangement in space of the atoms of the molecules of carbon-compounds, 35.
- fumaric and maleic acids, 1058.
- the position of atoms in space, 405.
- Wislicenus, J., and H. Reinhardt, action of dichlorether on phenol, 373.
- Wislicenus, J., and M. Siegfried, action of dichlorether on the dihydroxybenzenes, 374.
- Wislicenus, J., and G. Zwanziger, action of dichlorether on naphthol, 376.
- Wislicenus, W., action of ethyl acetate on ethyl phthalate, 1193.
- action of ethyl isobutyrate and of other ethereal salts on ethyl oxalate, 1193.
- action of ethyl oxalate on lactones, 1194.
- ethereal salts of aldehydo-acids, 129.
- ethyl oxalacetate, 361.
- ethyl oxallevalinate, 1273.
- synthesis of ketonic acids, 1178.
- Wislicenus, W., and E. Arnold, ethyl methyloxalacetate, 361.
- Wissokowitsch, production of lactic acid during artificial circulation of blood through the liver, 860.
- Witt, O. N., azophenine, 54.
- derivatives of  $\alpha$ -naphthol, 486.
- eurodines, 1186.
- eurodines and safranines, 491.
- homologues of aniline, 138.
- naphthalene-derivatives, 492.
- Witt, O. N. See also Brunner.
- Wohl, A., amidoacetals, 443.
- behaviour of catechol with Fehling's solution, 994.
- reduction of a solution of methyl-violet by invert-sugar, 995.
- Wolf, M. See Lenard.
- Wolff, C. H., detection of blood in urine, 880.
- Wolff, E., and C. Kreuzhage, behaviour of various plants towards nitrogenous manures, 320.
- Wolff, E., and others, foddering of horses and the circulation of mineral matter in the horse, 735.
- Wolff, L., acetalamine and diacetylamine, 809.
- dimethylindole, 371.
- Wolffenstein, R., action of phosphorus pentachloride on  $\alpha$ -hydroxy-naphthoic acid, 714.

- Wollheim, J., chlorophyll, 723.  
 Wollny, E., effects of atmospheric deposits on plants and soil, 316.  
 — influence of a crop or covering on the physical characters of a soil, 1222.  
 Wollny, R., the Reichert-Meißl process for the estimation of butter fat, 200.  
 Woods, C. D. See Atwater.  
 Wooldridge, L. C., changes effected by digestion on fibrinogen and fibrin, 618.  
 — coagulation of blood, 619.  
 Woussen, estimation of potassium by reduction of the platinochloride with sodium formate, 89.  
 Wright, C. R. A., and C. Thompson, aëration currents, 639.  
 Wülfing, E. A., nepheline-syenite from the Transvaal, 925.  
 Wurster, C., active oxygen in living tissues, 863.  
 — determination of ammonia in urine, 991.  
 — estimation of active oxygen, 627.  
 — formation of dyes by means of hydrogen peroxide, 141.  
 — oxidation by means of hydrogen peroxide, 43.  
 Wurtz, R., toxic action of bases produced by alcoholic fermentation, 622.  
 — volatile bases in the blood and breath, 616.  
 Wyss, G. H. v., determination of the rotatory dispersion of an active substance, 542.

## Y.

- Yoshii, T. See Kellner.  
 Young, S., delicate thermometer for lecture purposes, 410.  
 Young, S. See also Ramsay.  
 Young, W. C., aluminium as a natural constituent of wheat flour, 624.  
 Younger, W., determining the total acidity in flue gases from vitriol chambers, 193.  
 Yvon and Berlioz, mean composition of normal urine, 1320.

## Z.

- Záhoř, H., densimetric estimation of albumin in urine, 1227.  
 Záhoř, H. See also Huppert.  
 Zakrzewski, I. See Schramm.  
 Zaleski, S., excretion of iron from the animal organism, 977.

- Zalocostas, P., constitution of spongin, 1318.  
 Zaloziński, R., determination of paraffin, 759.  
 Zatti, C. See Ciamician.  
 Zaunschild, H., alkyl-derivatives of benzylamine: reduction of amarine, 1077.  
 Zeckendorff, A. See Hantzsch.  
 Zedel, W., action of hydroxylamine on acetylacetone, 1051.  
 Zehnder, L., influence of pressure on the index of refraction of water for sodium light, 765.  
 Zeisel, S., colchicine, 613.  
 Zeisel, S. See Herzig.  
 Zelinsky, N., 2:4-thioxen and tetramethylthiophen, 939.  
 Zelinsky, N. See also Melikoff.  
 Ziegeler, detection of mercury in urine by electrolysis, 1344.  
 Ziegler, J., molecular migrations in the quinoline series, 609.  
 Ziegler, J. H., new synthesis of tetraphenylethylene, 596.  
 Zimmermann, A., separation of alumina and glucina, 323.  
 Zimmermann, J. See Dennstedt.  
 Zincke, T., action of chlorine on phenols, 708.  
 —  $\beta$ -naphthaquinone, 158, 489.  
 Zincke, T., and C. Gerland, action of bromine on diamido- $\beta$ -naphthol, 290.  
 — action of hypochlorous and hypobromous acids on chlor- and brom-hydroxynaphthaquinone, and their conversion into hydrindonaphthene and indonaphthene-derivatives, 1198.  
 — conversion of hydrindonaphthene and indonaphthene-derivatives into substituted acetophenone-carboxylic acids, 1192.  
 Zincke, T., and H. Jaenke, orth-amidoazo-compounds of xylene and pseudocumene, 469.  
 Zincke, T., and F. Küster, action of chlorine on catechol and orthamidophenol, 1277.  
 Zincke, T., and A. T. Lawson, orth-amidoazo- and hydrazimido-compounds, 159.  
 Zincke, T., and H. Thelen, phenylhydrazine-derivatives of hydroxynaphthaquinone, 1097.  
 Zipperer, P., detection of sesame oil in cocoa butter, 1136.  
 Zürcher, H., oxidation of 1-quinoline-sulphonic acid, 378.  
 Zulkowsky, K., grinding mill for minerals, 85.  
 Zwanziger, G. See Wislicenus.